

10/593004

***** QUERY RESULTS *****

=> d his l28

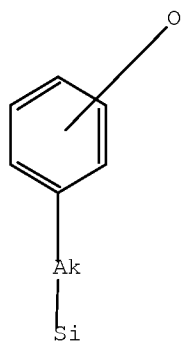
(FILE 'HCAPLUS' ENTERED AT 14:12:25 ON 27 JUL 2009)

L28 54 S L20 OR L27

SAVE TEMP L28 LEE004HCAP/A

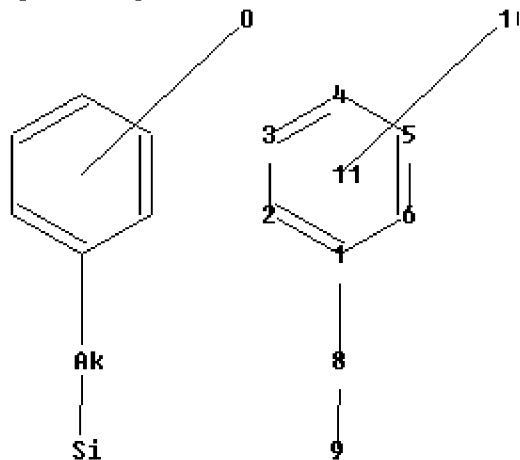
=> d que l28

L3 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L1.str



chain nodes :

8 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

1-8 8-9

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-8 8-9

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

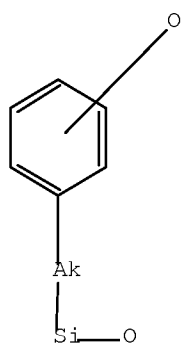
isolated ring systems :

containing 1 :

Match level :

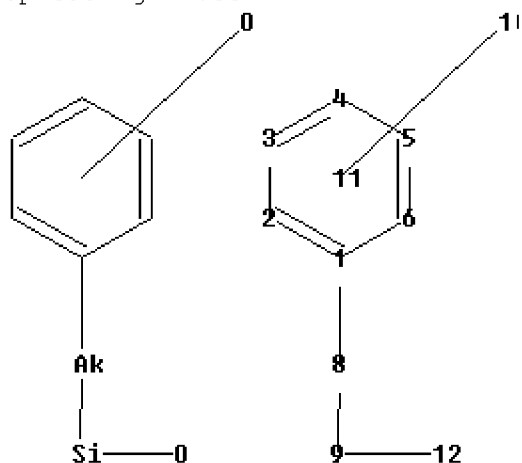
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 11:Atom

L5 5614 SEA FILE=REGISTRY SSS FUL L3
 L8 STR



Structure attributes must be viewed using STN Express query preparation:

Uploading L2.str



chain nodes :

8 9 10 12

ring nodes :

1 2 3 4 5 6

chain bonds :

1-8 8-9 9-12

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-8 8-9

exact bonds :

9-12
 normalized bonds :
 1-2 1-6 2-3 3-4 4-5 5-6
 isolated ring systems :
 containing 1 :

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 11:Atom
 12:CLASS
 Element Count :
 Node 8: Limited
 C,C1-5

L10 SCR 2043
 L12 1099 SEA FILE=REGISTRY SUB=L5 SSS FUL L8 AND L10
 L14 594 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L15 483 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (AY<2005 OR PY<2005
 OR PRY<2005)
 L16 278 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND 74/SC,SX
 L19 26352 SEA FILE=HCAPLUS ABB=ON PLU=ON RESISTS+OLD,UF/CT
 L20 27 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND L19
 L26 65758 SEA FILE=HCAPLUS ABB=ON PLU=ON RESIST? (2A) (COMPOSITION? OR
 SOLUTION? OR FORMUL? OR ELECTRON BEAM?)
 L27 36 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L26
 L28 54 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 OR L27

=> d l28 1-54 ibib abs fhitr hitind

L28 ANSWER 1 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2007:118066 HCAPLUS Full-text
 DOCUMENT NUMBER: 146:163976
 TITLE: Weatherable, thermostable polymers having improved
 flow composition, polymer manufacture, thermoplastic
 composition and molded article
 INVENTOR(S): Davis, Gary C.; Mullen, Brian D.; Sybert, Paul D.
 PATENT ASSIGNEE(S): General Electric Company, USA
 SOURCE: U.S. Pat. Appl. Publ., 40pp., Cont.-in-part of U.S.
 Ser. No. 25,635.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 10
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20070027271	A1	20070201	US 2006-426680	20060627 <--
US 6306507	B1	20011023	US 1999-368706	19990805 <--
US 20030072945	A1	20030417	US 2001-908396	20010718 <--
US 6610409	B2	20030826		
US 20030207123	A1	20031106	US 2002-307873	20021202 <--
US 6861482	B2	20050301		
US 40508	E1	20080916	US 2003-641029	20030815 <--

10/593004

US 20050159577	A1	20050721	US 2004-25635	20041229 <--
US 7169859	B2	20070130		
US 20070129492	A1	20070607	US 2006-537154	20060929 <--
WO 2008002757	A1	20080103	WO 2007-US70669	20070608

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP 2032624	A1	20090311	EP 2007-784364	20070608
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KR 2009021194	A	20090227	KR 2008-731666	20081226
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PRIORITY APPLN. INFO.:

		US 1999-134692P	P 19990518 <--
		US 1999-368706	A2 19990805 <--
		US 2001-908396	A2 20010718 <--
		US 2002-307873	A2 20021202 <--
		US 2004-25635	A2 20041229 <--
		US 2000-656208	E 20000906 <--
		US 2006-426680	A2 20060627
		US 2006-821598P	P 20060807
		WO 2007-US70669	W 20070608

AB A copolymer composition comprises a polysiloxane block having 4-50 siloxane units, and a polyarylate-polycarbonate block consisting essentially of 50-99 mol% aryate polyester units and 1-50 mol% aromatic carbonate units, where 1-30 mol% of the aromatic carbonate units are resorcinol carbonates, and 0-35 mol% of the aromatic carbonate units are bisphenol carbonates; where the sum of mole percentages of aryate polyester units, and aromatic carbonate units is 100 mol%; the polysiloxane blocks connect to an aryate ester unit, and/or an aromatic carbonate unit; the siloxane units of the polysiloxane block are present at 0.2-10% based on weight of the copolymer composition A molded article of 3.2 ± 0.12 mm thickness consists of the copolymer composition and has a percent transmittance ≥70%, according to ASTM D1003-00.

IT 858951-09-4P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(weatherable, thermostable polycarbonate polyester siloxane having improved flow composition and impact resistance)

RN 858951-09-4 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-benzenedicarbonyl dichloride, 1,3-benzenediol, carbonic dichloride, α-[[[3-(4-hydroxy-3-methoxyphenyl)propyl]dimethylsilyl]-o-[[[3-(4-hydroxy-3-methoxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilyl ene)] and 4,4'-(1-methylethylidene)bis[phenol] (CA INDEX NAME)

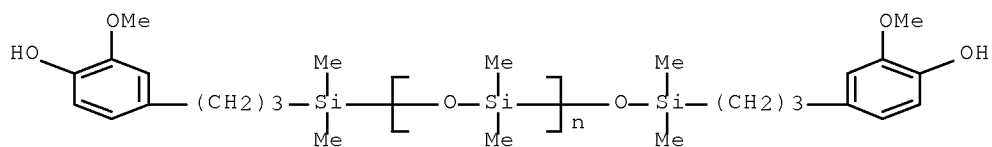
CM 1

CRN 163617-00-3

CMF (C2 H6 O Si)n C24 H38 O5 Si2

CCI PMS

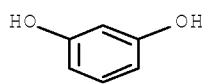
10/593004



CM 2

CRN 108-46-3

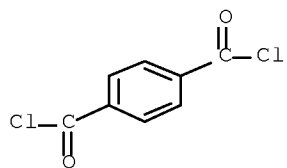
CMF C6 H6 O2



CM 3

CRN 100-20-9

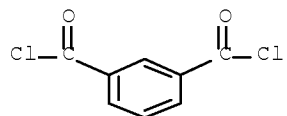
CMF C8 H4 Cl2 O2



CM 4

CRN 99-63-8

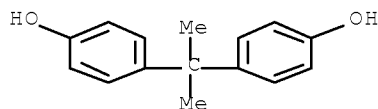
CMF C8 H4 Cl2 O2



CM 5

CRN 80-05-7

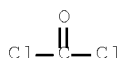
CMF C15 H16 O2



CM 6

CRN 75-44-5

CMF C C12 O



INCL 525446000; 525464000; 528029000

CC 37-3 (Plastics Manufacture and Processing)

IT Polysiloxanes, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polycarbonate-polyester-; weatherable, thermostable polycarbonate polyester siloxane having improved flow composition and impact resistance)

IT Polyesters, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polycarbonate-siloxane-; weatherable, thermostable polycarbonate polyester siloxane having improved flow composition and impact resistance)

IT Polycarbonates, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester-siloxane-; weatherable, thermostable polycarbonate polyester siloxane having improved flow composition and impact resistance)

IT Impact-resistant materials

Transparent materials

(weatherable, thermostable polycarbonate polyester siloxane having improved flow composition and impact resistance)

IT 858951-09-4P 858951-11-8P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(weatherable, thermostable polycarbonate polyester siloxane having improved flow composition and impact resistance)

L28 ANSWER 2 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1049149 HCAPLUS Full-text

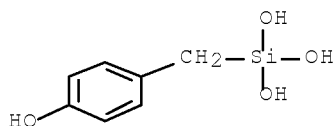
DOCUMENT NUMBER: 143:356596

TITLE: Negative-working resist composition containing polysilsesquioxane

10/593004

INVENTOR(S): Ando, Tomoyuki
 PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005266474	A	20050929	JP 2004-80481	20040319 <--
JP 4294521	B2	20090715		
WO 2005091073	A1	20050929	WO 2005-JP4326	20050311 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1726992	A1	20061129	EP 2005-720597	20050311 <--
R: DE				
US 20080241753	A1	20081002	US 2006-593004	20060914 <--
PRIORITY APPLN. INFO.:			JP 2004-80481	A 20040319 <--
			WO 2005-JP4326	W 20050311
AB	Disclosed is a neg.-working resist composition comprising (a) a silsesquioxane resin having units of [Si(-R1-C6H4-OH)O3/2] (R1 = C1-5 alkylene) and [SiPhO3/2], (b) an acid-generating compound, and (c) a crosslinking agent.			
IT	188557-77-9P			
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (neg.-working electron-beam resist composition containing polysilsesquioxane)			
RN	188557-77-9 HCAPLUS			
CN	Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, homopolymer (CA INDEX NAME)			
CM	1			
CRN	188557-76-8			
CMF	C7 H10 O4 Si			



IC ICM G03F007-038
 ICS C08G077-16; G03F007-075; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38

10/593004

ST neg working electron beam resist
comprn polysilsesquioxane

IT Electron beam resists
Resists
(neg.-working electron-beam resist
composition containing polysilsesquioxane)

IT Silsesquioxanes
RL: TEM (Technical or engineered material use); USES (Uses)
(neg.-working electron-beam resist
composition containing polysilsesquioxane)

IT 66003-78-9, Triphenylsulfonium trifluoromethane sulfonate 138529-81-4,
Bis(cyclohexylsulfonyl)diazomethane 144317-44-2, Triphenylsulfonium
nonafluorobutane sulfonate 357164-86-4
RL: TEM (Technical or engineered material use); USES (Uses)
(acid-generating agent; neg.-working electron-beam
resist composition containing polysilsesquioxane)

IT 3089-11-0 4356-60-9 17464-88-9
RL: TEM (Technical or engineered material use); USES (Uses)
(crosslinker; neg.-working electron-beam
resist composition containing polysilsesquioxane)

IT 188557-77-9P 475115-04-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(neg.-working electron-beam resist
composition containing polysilsesquioxane)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L28 ANSWER 3 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:641929 HCAPLUS Full-text

DOCUMENT NUMBER: 143:134122

TITLE: Weatherable, thermostable polycarbonate polyesters
having improved flow composition and impact
resistance

INVENTOR(S): Davis, Gary C.; Mullen, Brian D.; Sybert, Paul D.

PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: U.S. Pat. Appl. Publ., 32 pp., Cont.-in-part of U.S.
Ser. No. 307,873.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 10

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20050159577	A1	20050721	US 2004-25635	20041229 <--
US 7169859	B2	20070130		
US 6306507	B1	20011023	US 1999-368706	19990805 <--
US 20030072945	A1	20030417	US 2001-908396	20010718 <--
US 6610409	B2	20030826		
US 20030207123	A1	20031106	US 2002-307873	20021202 <--
US 6861482	B2	20050301		
US 40508	E1	20080916	US 2003-641029	20030815 <--
US 20070027271	A1	20070201	US 2006-426680	20060627 <--
US 20070129492	A1	20070607	US 2006-537154	20060929 <--
US 20070122627	A1	20070531	US 2007-627828	20070126 <--
PRIORITY APPLN. INFO.:			US 1999-134692P	P 19990518 <--
			US 1999-368706	A2 19990805 <--
			US 2001-908396	A2 20010718 <--

10/593004

US 2002-307873	A2 20021202 <--
US 2000-656208	E 20000906 <--
US 2001-966127	A2 20010928 <--
US 2004-25635	A2 20041229 <--
US 2006-426680	A2 20060627
US 2006-821598P	P 20060807

AB A copolymer composition comprises an arylate polyester unit, an aromatic carbonate unit, and a soft-block moiety, wherein individual occurrences of the soft block moiety are linked by a spacer unit comprising one or more of the arylate polyester units, one or more of the aromatic carbonate units, or a combination comprising each of these. In one embodiment, a soft block moiety comprises a polysiloxane unit. A film of the composition has a percent transmittance of greater than or equal to 60%, and good low temperature impact strength. A method of forming a copolymer composition is disclosed, comprising substantially forming the bis-haloformates of a dihydroxy compound comprising an arylate polyester unit, and a dihydroxy compound comprising a soft-block moiety, and reacting the bis haloformates with a dihydroxy aromatic compound

IT 858951-09-4P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(weatherable, thermostable polycarbonate polyesters having improved flow composition and impact resistance)

RN 858951-09-4 HCAPLUS

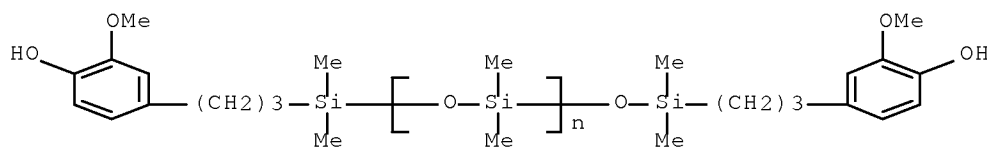
CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-benzenedicarbonyl dichloride, 1,3-benzenediol, carbonic dichloride, α -[[3-(4-hydroxy-3-methoxyphenyl)propyl]dimethylsilyl]- ω -[[[3-(4-hydroxy-3-methoxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilyl ene)] and 4,4'-(1-methylethyldiene)bis[phenol] (CA INDEX NAME)

CM 1

CRN 163617-00-3

CMF (C2 H6 O Si)_n C24 H38 O5 Si2

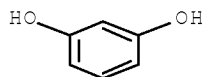
CCI PMS



CM 2

CRN 108-46-3

CMF C6 H6 O2

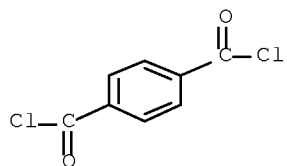


10/593004

CM 3

CRN 100-20-9

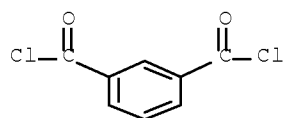
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CM 4

CRN 99-63-8

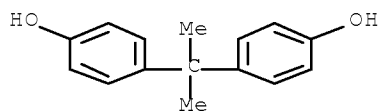
CMF C8 H4 Cl2 O2



CM 5

CRN 80-05-7

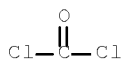
CMF C15 H16 O2



CM 6

CRN 75-44-5

CMF C C12 O



IC ICM C08G064-00
 INCL 528198000
 CC 37-3 (Plastics Manufacture and Processing)
 IT Polysiloxanes, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polycarbonate-polyester-; weatherable, thermostable polycarbonate polyesters having improved flow composition and impact resistance)
 IT Polyesters, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polycarbonate-siloxane-; weatherable, thermostable polycarbonate polyesters having improved flow composition and impact resistance)
 IT Polycarbonates, preparation
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-siloxane-; weatherable, thermostable polycarbonate polyesters having improved flow composition and impact resistance)
 IT Impact-resistant materials
 Transparent materials
 (weatherable, thermostable polycarbonate polyesters having improved flow composition and impact resistance)
 IT 858951-09-4P 858951-11-8P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (weatherable, thermostable polycarbonate polyesters having improved flow composition and impact resistance)
 OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
 REFERENCE COUNT: 96 THERE ARE 96 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 4 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:347109 HCAPLUS Full-text
 DOCUMENT NUMBER: 142:393243
 TITLE: Polycarbonate resin composition and optical part
 INVENTOR(S): Kawato, Hiroshi; Horio, Yoshihiko; Ishikawa, Yasuhiro
 PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005035659	A1	20050421	WO 2004-JP14638	20041005 <--
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RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,			

10/593004

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

JP 2005112963	A	20050428	JP 2003-347829	20031007 <--
DE 112004001816	T5	20060824	DE 2004-112004001816	20041005 <--
CN 1863871	A	20061115	CN 2004-80029510	20041005 <--
CN 100393803	C	20080611		
US 20070037906	A1	20070215	US 2006-573809	20060328 <--
US 7553893	B2	20090630		
KR 2006131736	A	20061220	KR 2006-706646	20060406 <--

PRIORITY APPLN. INFO.:

JP 2003-347829	A	20031007 <--
WO 2004-JP14638	W	20041005 <--

AB The composition comprises polycarbonate resin 100, arylphosphine (e.g., PPh₃) 0.001-0.1, alicyclic epoxy compound 0.01-1.0 part, and optionally 0.01-1.0 part of an acrylic resin. The composition exhibits excellent optical properties, resistance to high temperature, high humidity, heat aging (especially high temperature aging), heat, and impact. The composition is suitable for production of optical parts, such as a lens of optical semiconductor device mounted on vehicles which can be used even in especially severe environment.

IT 161109-50-8P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(impact-, moisture-, heat- and aging-resistant polycarbonate resin compns. for optical parts)

RN 161109-50-8 HCAPLUS

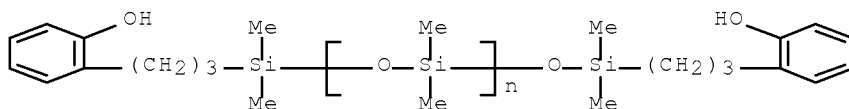
CN Carbonic dichloride, polymer with α -[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]-~~o~~-[[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 158167-48-7

CMF (C2 H6 O Si)_n C22 H34 O3 Si2

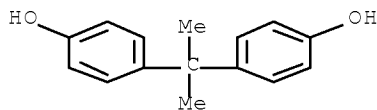
CCI PMS



CM 2

CRN 80-05-7

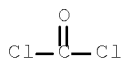
CMF C15 H16 O2



CM 3

CRN 75-44-5

CMF C C12 O



- IC ICM C08L069-00
ICS C08K005-1515; C08K005-50
- CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 73
- IT Epoxy resins, uses
RL: MOA (Modifier or additive use); USES (Uses)
(alicyclic; impact-, moisture-, heat- and aging-resistant polycarbonate resin ~~compos.~~ for optical parts)
- IT Polycarbonates, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cardo; impact-, moisture-, heat- and aging-resistant polycarbonate resin ~~compos.~~ for optical parts)
- IT Lenses
Optical instruments
(impact-, moisture-, heat- and aging-resistant polycarbonate resin ~~compos.~~ for optical parts)
- IT Polycarbonates, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(impact-, moisture-, heat- and aging-resistant polycarbonate resin ~~compos.~~ for optical parts)
- IT Polysiloxanes, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polycarbonate-; impact-, moisture-, heat- and aging-resistant polycarbonate resin ~~compos.~~ for optical parts)
- IT Cardo polymers
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polycarbonates; impact-, moisture-, heat- and aging-resistant polycarbonate resin ~~compos.~~ for optical parts)
- IT Polycarbonates, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP

(Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (polysiloxane-; impact-, moisture-, heat- and aging-resistant
 polycarbonate resin ~~compos.~~ for optical parts)

IT 305321-96-4

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (assumed monomers; impact-, moisture-, heat- and aging-
 resistant polycarbonate resin ~~compos.~~ for optical
 parts)

IT 41120-30-3P, 1,1-Bis(4-hydroxyphenyl)cyclohexane-bisphenol A-phosgene
 copolymer ~~161109-50-8P~~ 172682-69-8P,
 9,9-Bis(4-hydroxy-3-methylphenyl)fluorene-bisphenol A-phosgene copolymer
 849773-95-1P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (impact-, moisture-, heat- and aging-resistant polycarbonate
 resin ~~compos.~~ for optical parts)

IT 603-35-0, JC 263, uses 9011-14-7, PMMA 25085-98-7, Celloxide 2021P
 70563-26-7, Dianal BR 83

RL: MOA (Modifier or additive use); USES (Uses)
 (impact-, moisture-, heat- and aging-resistant polycarbonate
 resin ~~compos.~~ for optical parts)

IT 304853-19-8, Toughlon FN 1700A

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (impact-, moisture-, heat- and aging-resistant polycarbonate
 resin ~~compos.~~ for optical parts)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (3 CITINGS)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 5 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:99555 HCAPLUS Full-text

DOCUMENT NUMBER: 142:177712

TITLE: Alkali-soluble silicon-containing polymer, its
 production and heat-resistant resin
~~composition~~ and heat-resistant film
 using it

INVENTOR(S): Tauchi, Kunikazu; Suzuki, Hiroshi

PATENT ASSIGNEE(S): Toagosei Co., Ltd., Japan

SOURCE: PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

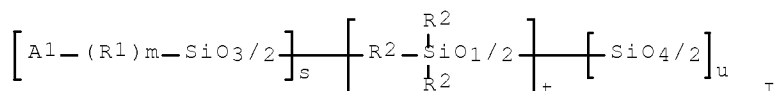
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005010077	A1	20050203	WO 2004-JP10853	20040729 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,			
	CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,			
	GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,			
	LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,			
	NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,			
	TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,			

10/593004

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

EP 1650250	A1	20060426	EP 2004-748064	20040729 <--
R: DE, GB				
CN 1829762	A	20060906	CN 2004-80021734	20040729 <--
CN 100430432	C	20081105		
CN 101255233	A	20080903	CN 2008-10091732	20040729 <--
KR 2006052926	A	20060519	KR 2006-701936	20060127 <--
US 20070134424	A1	20070614	US 2006-565682	20060628 <--
PRIORITY APPLN. INFO.:			JP 2003-203411	A 20030729 <--
			JP 2003-203412	A 20030729 <--
			CN 2004-80021734	A3 20040729 <--
			WO 2004-JP10853	W 20040729 <--

GI



AB The polymer is of I type compound (Al = Ph having hydroxy or alkoxy; R1 = Cl-4 alkylene; m = 0 or 1; R2 = Cl-4 alkyl; s, u = pos. number; t = 0 or pos. number; provided that 0 ≤ t/(s+u) ≤ 1 and 0 < u/s ≤ 5) and has a weight-average mol. weight of 500 to 500,000. The polymer can be prepared by the hydrolytic condensation of s-mol of Al(R1)mSiM13 with t-mol of R23SiM2 (M2 = hydrolyzable groups) and u-mol of SiM34 (M3 = hydrolyzable groups). Thus, heating 3-(3-methoxy-4-hydroxyphenyl)propyltriethoxysilane 65.7 with tetraethoxysilane 33.3, hexamethyldisiloxane 3.2 and PhMe 10 at 70° with stirring, adding a mixture of water 20, concentrate HCl 0.5 and ethanol 10 g into the mixture above over 1 h and heating at reflux for 4 h gave a polymer after workup. The polymer had Mw 8.5x10³, Mn 4.4x10³ and softening temperature 95-100°.

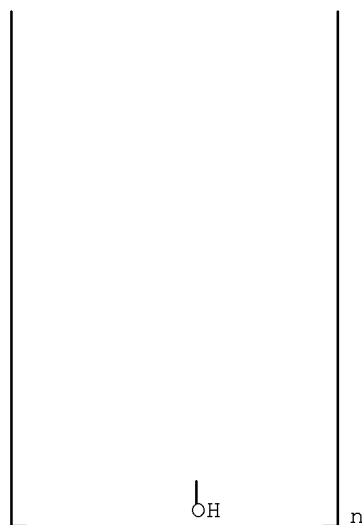
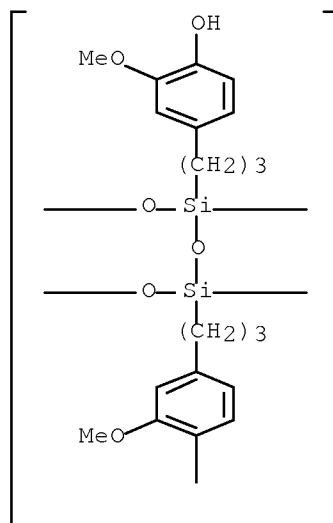
IT ~~402789-60-0F~~

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of alkali-soluble silicon-containing polymers and heat-resistant films made from them)

RN 402789-60-0 HCAPLUS

CN Poly[[1,3-bis[3-(4-hydroxy-3-methoxyphenyl)propyl]-1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



IC ICM C08G077-14
ICS C08G077-20; G03F007-075

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 76

IT 107-46-0DP, Hexamethyldisiloxane, polysiloxanes terminated with
3277-26-7DP, 1,1,3,3-Tetramethyldisiloxane, polysiloxanes terminated with
402789-60-0P 833480-43-6DP, trimethylsilyl-terminated
833480-43-6P 833480-44-7P 833480-45-8DP,
trimethylsilyl-terminated 833480-46-9DP, trimethylsilyl- or
dimethylsilyl-terminated 833480-46-9P 833480-47-0DP, trimethylsilyl-
or dimethylsilyl-terminated 833480-47-0P 833480-48-1DP,
trimethylsilyl-terminated 833480-49-2DP, trimethylsilyl-terminated

10/593004

833480-50-5DP, dimethylsilyl-terminated

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manufacture of alkali-soluble silicon-containing polymers and heat-resistant films made from them)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 6 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:995697 HCAPLUS Full-text

DOCUMENT NUMBER: 141:429657

TITLE: Positive resist composition

INVENTOR(S): Yasunami, Shoichiro; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan; Fujifilm Corporation

SOURCE: U.S. Pat. Appl. Publ., 24 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 20040229161	A1	20041118	US 2004-840624	20040507 <--
US 7217493	B2	20070515		
JP 2004334107	A	20041125	JP 2003-133194	20030512 <--
JP 4262516	B2	20090513		

PRIORITY APPLN. INFO.: JP 2003-133194 A 20030512 <--

AB A pos. resist composition comprises (A) polysiloxane or polysilsesquioxane that has a property of increasing solubility in an alkali developing solution by the action of an acid and contains a group capable of being decomposed with an acid, (B) a compound that generates a sulfonic acid upon irradiation of an actinic ray or radiation and (C) an organic basic compound, wherein an amount of the compound that generates a sulfonic acid upon irradiation of an actinic ray or radiation is 6-20% by weight based on the total solid content of the pos. resist composition. The object of the present invention is to provide a pos. resist composition that simultaneously satisfies high sensitivity, high resolution and good line edge roughness and can be used in lithog. using an electron beam, an x-ray or an EUV beam.

IT 199125-55-8

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(resin; pos. resist composition comprising polysiloxane or silsesquioxane)

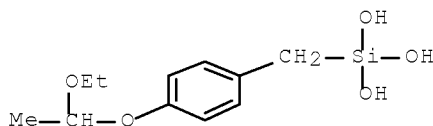
RN 199125-55-8 HCAPLUS

CN Silanetriol, [[4-(1-ethoxyethoxy)phenyl)methyl]-, polymer with [(4-hydroxyphenyl)methyl]silanetriol (9CI) (CA INDEX NAME)

CM 1

CRN 199125-54-7

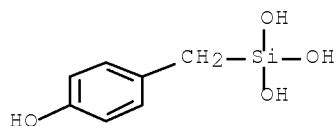
CMF C11 H18 O5 Si



CM 2

CRN 188557-76-8

CMF C7 H10 O4 Si



IC ICM G03C001-76

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

ST pos resist compn EUV electron x ray polysiloxane

IT Positive photoresists

(UV; pos. resist composition comprising polysiloxane or silsesquioxane)

IT Electron beam resists

(pos. resist composition comprising polysiloxane or silsesquioxane)

IT Polysiloxanes, properties

Silsesquioxanes

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. resist composition comprising polysiloxane or silsesquioxane)

IT 102-86-3, Tri-n-hexylamine 124-40-3, N,N-Dimethylamine, uses

2052-49-5, Tetra-(n-butyl)ammonium hydroxide

RL: TEM (Technical or engineered material use); USES (Uses)

(basic compound; pos. resist composition comprising polysiloxane or silsesquioxane)

IT 13891-29-7 39153-56-5 66003-78-9 144089-15-6 144317-44-2

153698-46-5 194999-85-4 197447-16-8 301664-71-1 335199-99-0

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(photoacid generator; pos. resist composition comprising polysiloxane or silsesquioxane)

IT 19600-49-8 365971-71-7 365971-72-8

RL: TEM (Technical or engineered material use); USES (Uses)

(pos. resist composition comprising polysiloxane or silsesquioxane)

IT 341972-61-0DP, reaction products with Et vinyl ether 795296-88-7DP,

reaction products with Et vinyl ether 795296-90-1DP, reaction products with Et vinyl ether

10/593004

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(resin; pos. resist composition comprising polysiloxane or silsesquioxane)

IT 341972-66-5DP, reaction products with Et vinyl ether 341972-68-7DP, reaction products with ether derivs.

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(resin; pos. resist composition comprising polysiloxane or silsesquioxane)

IT 109-92-2D, Ethyl vinyl ether, reaction products with polysiloxanes or polysilsesquioxane 199125-55-8 341972-75-6 376600-50-9 376600-56-5 795296-87-6

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(resin; pos. resist composition comprising polysiloxane or silsesquioxane)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 7 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:534428 HCAPLUS Full-text

DOCUMENT NUMBER: 141:79326

TITLE: Chemical amplification type silicone base positive photoresist composition

INVENTOR(S): Hirayama, Taku; Yamada, Tomotaka; Kawana, Daisuke; Tamura, Kouki; Sato, Kazufumi

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004055598	A1	20040701	WO 2003-JP15344	20031201 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003302990	A1	20040709	AU 2003-302990	20031201 <--
DE 10393820	T5	20051027	DE 2003-10393820	20031201 <--
TW 282040	B	20070601	TW 2003-92133901	20031202 <--
US 20060003252	A1	20060105	US 2005-537290	20050622 <--
PRIORITY APPLN. INFO.:			JP 2002-350563	A 20021202 <--
			JP 2003-46611	A 20030224 <--
			JP 2003-190618	A 20030702 <--
			WO 2003-JP15344	W 20031201 <--

AB A chemical amplification type silicone base pos. resist composition that can be produced from easily procurable compds. as raw materials through simple

10/593004

means and can provide a bilayer resist material from which fine pattern of high resolution, high aspect ratio, desirable sectional morphol. and low line edge roughness can be formed. In particular, a chemical amplification type pos. resist compn. comprising alkali soluble resin (A) and photoacid generator (B) wherein a ladder type silicone copolymer comprising (hydroxyphenylalkyl)silsesquioxane units (a1), (alkoxyphenylalkyl)silsesquioxane units (a2) and alkyl- or phenylsilsesquioxane units (a3) is used as the alkali soluble resin (A). The copolymer wherein in the component (A), the units (a3) are phenylsilsesquioxane units is a novel compound

IT 711008-00-3

RL: TEM (Technical or engineered material use); USES (Uses)
(chemical amplification type silicone base pos. photoresist composition)

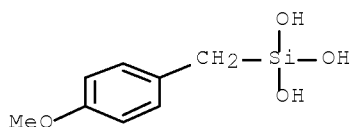
RN 711008-00-3 HCAPLUS

CN Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, polymer with
1-[(4-methoxyphenyl)methyl]silanetriol and 1-phenylsilanetriol (CA INDEX NAME)

CM 1

CRN 546114-67-4

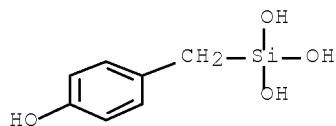
CMF C8 H12 O4 Si



CM 2

CRN 188557-76-8

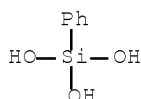
CMF C7 H10 O4 Si



CM 3

CRN 3047-74-3

CMF C6 H8 O3 Si



IC ICM G03F007-11
ICS C08G077-14; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 38
IT 711008-00-3
RL: TEM (Technical or engineered material use); USES (Uses)
(chemical amplification type silicone base pos. photoresist composition)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(6 CITINGS)
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 8 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:869229 HCAPLUS Full-text
DOCUMENT NUMBER: 137:377441
TITLE: Photoimageable resist composition
containing specific polysilsesquioxane for bilayer
resist system
INVENTOR(S): Gronbeck, Dana A.; Barclay, George G.; Linehan, Leo
L.; Xiong, Kao; Kanagasabapathy, Subareddy
PATENT ASSIGNEE(S): Shipley Company, LLC, USA
SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002091083	A1	20021114	WO 2002-US14732	20020508 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
TW 594416	B	20040621	TW 2002-91109417	20020507 <--
AU 2002305499	A1	20021118	AU 2002-305499	20020508 <--
US 20030099899	A1	20030529	US 2002-140761	20020508 <--
US 6803171	B2	20041012		
EP 1407324	A1	20040414	EP 2002-734323	20020508 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005507087	T	20050310	JP 2002-588280	20020508 <--
US 20050026077	A1	20050203	US 2004-924350	20040823 <--
PRIORITY APPLN. INFO.:				
			US 2001-289368P	P 20010508 <--
			US 2002-140761	A1 20020508 <--
			WO 2002-US14732	W 20020508 <--
AB Disclosed are photoimaging compns. containing silsesquioxane binder polymers and photoactive compds., methods of forming relief images using such compns. and methods of manufacturing electronic devices using such compns. Such				

compos. are useful as photoresists and in the manufacture of optoelectronic devices.

IT 188557-77-9DP, reaction products with Et vinyl ether or cyclohexyl vinyl ether

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photoimaging composition containing specific polysilsesquioxane)

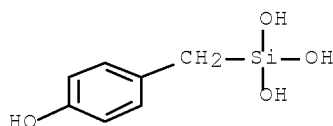
RN 188557-77-9 HCAPLUS

CN Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 188557-76-8

CMF C7 H10 O4 Si



IC ICM G03F007-029

ICS G03F007-032; G03F007-004; G03C001-725

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

II 188557-77-9DP, reaction products with Et vinyl ether or
cyclohexyl vinyl ether 188629-68-7DP, reaction products with
Et vinyl ether or cyclohexyl vinyl ether 475134-60-2DP,
reaction products with cyclohexyl vinyl ether 475134-60-2P
475134-61-3P 475134-62-4P 475134-63-5DP,
reaction products with cyclohexyl vinyl ether 475134-63-5P
475134-64-6P 475134-65-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(photoimaging composition containing specific polysilsesquioxane)

IT 475115--04--9

RL: TEM (Technical or engineered material use); USES (Uses)

(photoimaging composition containing specific polysilsesquioxane)

OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS
RECORD (17 CITINGS)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 9 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:799404 HCAPLUS Full-text

DOCUMENT NUMBER: 139:60263

TITLE: Application of blends and side chain Si-O copolymers
as high-etch-resistant sub-100-nm electron-
beam resists

AUTHOR(S): Huang, Wu-Song; Kwong, Rane W.; Moreau, Wayne M.;
Lang, Robert; Medeiros, David R.; Petrillo, Karen E.;
Mahorowala, Arpan P.; Angelopoulos, Marie; Lin,
Qinghuang; Dai, Junyan; Ober, Christopher Kemper

CORPORATE SOURCE: IBM Microelectronics Div., Hopewell Junction, NY,
12533, USA

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2002), 4690(Pt. 1,

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Recently, there is a significant interest in using chemical amplified (CA) resists for electron-beam (E-Beam) applications including mask making, direct write, and projection printing. CA resists provide superior lithog. performance in comparison to traditional non CA E-beam resists in particular high contrast, resolution, and sensitivity. Due to the electron scattering effect and the image collapse problem, thinner imaging layer is desirable. Sufficient etch selectivity is needed to compensate reduced resist thickness. Therefore, there is a need to have a high etch resistant resist system which can survive Cr etch (Cl_2/O_2 RIE etchant) process in mask making. For device making, the thin film bilayer approach needs a resist that can withstand O_2 etch for image transfer to the underlayer. The authors found Si-O containing polymer has the etch characteristics for both applications. In the first approach, using a blend of KRS-XE and silsesquioxane polymer, the authors have been able to resolve resist images down to 50 nm with etch rate 20% slower than conventional novolak I-line resist systems. In the second approach, we have investigated the copolymer of vinylphenol and acrylate siloxysilane systems. Superior litho performance and etch properties have been observed. In this presentation, the authors discuss the chemical, the miscibility in blends, etch characteristics and lithog. performance of these resist systems.

IT 188629-68-7D, partially protected

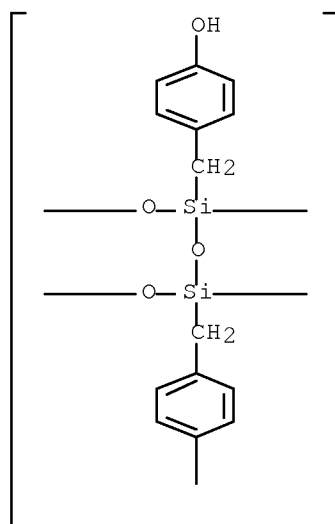
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

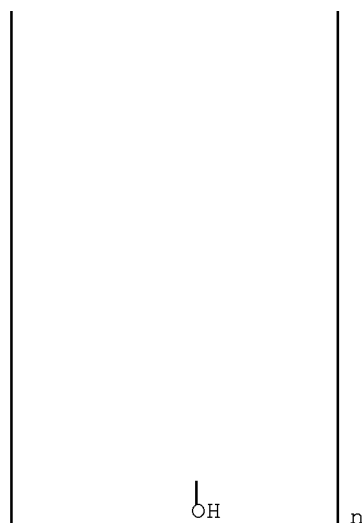
(lithog. performance of high-etch-resistant sub-100-nm chemical amplification electron-beam resist containing blend of KRS-XE resist and hydroxybenzylsilsesquioxane polymer)

RN 188629-68-7 HCAPLUS

CN Poly[[1,3-bis[(4-hydroxyphenyl)methyl]-1,3:1,3-disiloxanediyliidene]-1,3-bis(oxy)] (CA INDEX NAME)

PAGE 1-A





PAGE 2-A

- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST KRSXE silsesquioxane polymer blend electron beam lithog resist; vinylphenol acrylate siloxysilane polymer electron beam lithog resist
- IT Electron beam resists
(chemical amplification; etch resistant chemical amplified electron-beam resists based either on KRS-XE resist and hydroxybenzylsilsesquioxane polymer blends or side chain silicon-oxygen copolymers)
- IT Photomasks (lithographic masks)
(etch resistant chemical amplified electron-beam resists based either on KRS-XE resist and hydroxybenzylsilsesquioxane polymer blends or side chain silicon-oxygen copolymers)
- IT Surface roughness
(lithog. performance of high-etch-resistant sub-100-nm chemical amplification electron-beam resist containing blend of KRS-XE resist and hydroxybenzylsilsesquioxane polymer)
- IT Silsesquioxanes
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(lithog. performance of high-etch-resistant sub-100-nm chemical amplification electron-beam resist containing blend of KRS-XE resist and hydroxybenzylsilsesquioxane polymer)
- IT Etching
(plasma; etch resistance of chemical amplified electron-beam resists based either on KRS-XE resist and hydroxybenzylsilsesquioxane polymer blends or side chain silicon-oxygen copolymers)
- IT 75-59-2, Tetramethylammonium hydroxide
RL: NUU (Other use, unclassified); USES (Uses)
(developer; lithog. performance of high-etch-resistant sub-100-nm chemical amplification electron-beam resist containing blend of KRS-XE resist and hydroxybenzylsilsesquioxane polymer)
- IT 547757-38-0DP, hydrolyzed, partially protected with ketal groups

10/593004

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(etch resistant chemical amplified electron-beam resists based on copolymer of vinylphenol and acrylate siloxysilane)

IT 188629-68-7D, partially protected 302353-92-0, KRS-XE

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(lithog. performance of high-etch-resistant sub-100-nm chemical amplification electron-beam resist containing blend of KRS-XE resist and hydroxybenzylsilsesquioxane polymer)

IT 7782-44-7, Oxygen, uses 7782-50-5, Chlorine, uses

RL: NUU (Other use, unclassified); USES (Uses)

(plasma etch; etch resistance of chemical amplified electron-beam resists based either on KRS-XE resist and hydroxybenzylsilsesquioxane polymer blends or side chain silicon-oxygen copolymers)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 10 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:638185 HCAPLUS Full-text

DOCUMENT NUMBER: 137:192761

TITLE: Radiation sensitive silicon-containing negative resists and use thereof

INVENTOR(S): Angelopoulos, Marie; Aviram, Ari; Huang, Wu-Song; Kwong, Ranee W.; Lang, Robert N.; Lin, Qinghuang; Moreau, Wayne M.

PATENT ASSIGNEE(S): International Business Machines Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 20020115017	A1	20020822	US 2001-785609	20010216 <--
US 6653045	B2	20031125		
US 20040048204	A1	20040311	US 2003-657168	20030909 <--
US 6821718	B2	20041123		

PRIORITY APPLN. INFO.: US 2001-785609 A3 20010216 <--

AB A neg. resist composition, comprises: (a) silicon-containing polymer with pendant fused moieties selected from the group consisting of fused aliphatic moieties, homocyclic fused aromatic moieties, and heterocyclic fused aromatic and sites for reaction with a crosslinking agent, (b) an acid-sensitive crosslinking agent, and (c) a radiation-sensitive acid generator. The resist composition is used to form a patterned material layer in a substrate.

IT 188557-77-9, 4-Hydroxybenzylsilanetriol homopolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(radiation sensitive silicon-containing neg. photoresists for photolithog. containing)

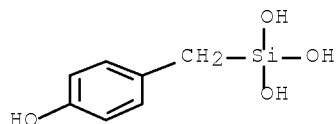
RN 188557-77-9 HCAPLUS

CN Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, homopolymer (CA INDEX NAME)

CM 1

10/593004

CRN 188557-76-8
CMF C7 H10 O4 Si



IC ICM G03F007-00
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 38
IT 1468-95-7, 9-Anthracene methanol 188557-77-9,
4-Hydroxybenzylsilanetriol homopolymer 188629-68-7
RL: TEM (Technical or engineered material use); USES (Uses)
(radiation sensitive silicon-containing neg. photoresists for photolithog.
containing)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

L28 ANSWER 11 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:533964 HCAPLUS Full-text
DOCUMENT NUMBER: 137:101417
TITLE: Mask-making using resist having sio bond-containing
polymer
INVENTOR(S): Angelopoulos, Marie; Aviram, Ari; Guarnieri, C.
Richard; Huang, Wu-song; Kwong, Ranee; Lang, Robert
N.; Mahorowala, Arpan P.; Medeiros, David R.; Moreau,
Wayne M.
PATENT ASSIGNEE(S): International Business Machines Corporation, USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

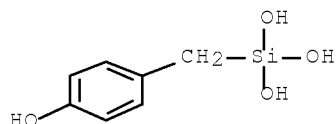
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 6420084	B1	20020716	US 2000-602136	20000623 <--

PRIORITY APPLN. INFO.: US 2000-602136 20000623 <--

AB The invention provides improved resist compns. and lithog. methods using the
resist compns. which are acid-catalyzed resists characterized by the presence
of an SiO-containing polymer. The invention also encompasses methods of
forming patterned material layers (especially conductive, semiconductive, or
magnetic material structures) using the combination of the SiO-containing
resist and a halogen compound-containing pattern transfer etchant where the
halogen is Cl, Br or I.

IT 188557-77-9DE, (4-Hydroxybenzyl)silanetriol homopolymer,
methoxycyclohexene or/and toluenesulfonate or camphorsulfonate or
adamantanecarboxylic acid chloride protected
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic
preparation); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(mask-making using resist having sio bond-containing polymer for

photolithog.)
 RN 188557-77-9 HCAPLUS
 CN Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, homopolymer (CA INDEX NAME)
 CM 1
 CRN 188557-76-8
 CMF C7 H10 O4 Si



IC ICM G03F007-004
 INCL 430270100
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35, 38
 IT 188557-77-9DP, (4-Hydroxybenzyl)silanetriol homopolymer, methoxycyclohexene or/and toluenesulfonate or camphorsulfonate or adamantanecarboxylic acid chloride protected 188629-68-7DP, methoxycyclohexene or/and toluenesulfonate or camphorsulfonate or adamantanecarboxylic acid chloride protected
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (mask-making using resist having sio bond-containing polymer for photolithog.)
 OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
 REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
 L28 ANSWER 12 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:798707 HCAPLUS Full-text
 DOCUMENT NUMBER: 135:336925
 TITLE: Resist composition for use in chemical amplification and method for forming a resist pattern thereof
 INVENTOR(S): Kozawa, Miwa; Nozaki, Koji; Watanabe, Keiji; Yano, Ei
 PATENT ASSIGNEE(S): Fujitsu Limited, Japan
 SOURCE: U.S. Pat. Appl. Publ., 8 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20010036594	A1	20011101	US 2001-785306	20010220 <--
US 20020177070	A1	20021128	US 2002-97818	20020315 <--
US 7122288	B2	20061017		
US 20060263723	A1	20061123	US 2006-492955	20060726 <--
US 7488569	B2	20090210		

10/593004

PRIORITY APPLN. INFO.:

JP 2000-89790	A	20000328 <--
US 2001-785306	A2	20010220 <--
JP 2001-93727	A	20010328 <--
US 2002-97818	A3	20020315 <--

GI



I

AB Disclosed is a neg. resist composition comprising an alkaline-soluble resin and a compound having an oxetane structure I. This composition further comprises an acid generator and provides a fine resist pattern with high sensitivity at a wavelength of less than 200 nm. The resist composition can be used in both monolayer and bilayer resist methods, thereby meeting the requirements for high sensitivity at a shorter wavelength and etching resistance.

IT 370590-43-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chemical amplification photoresist composition containing)

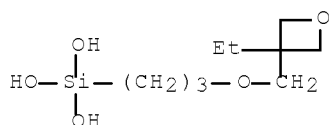
RN 370590-43-5 HCAPLUS

CN Silicic acid, ethyl [2-(4-hydroxyphenyl)ethyl]dimethylsilyl trimethylsilyl ester, polymer with [3-[(3-ethyl-3-oxetanyl)methoxy]propyl]silanetriol (9CI) (CA INDEX NAME)

CM 1

CRN 370588-69-5

CMF C9 H20 O5 Si



CM 2

CRN 370590-42-4

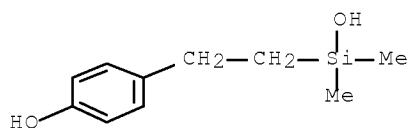
CMF C10 H16 O2 Si . x C3 H10 O Si . x C2 H6 O . x Unspecified

CM 3

CRN 158036-17-0

CMF C10 H16 O2 Si

10/593004



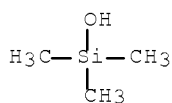
CM 4

CRN 1343-98-2
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 5

CRN 1066-40-6
CMF C3 H10 O Si



CM 6

CRN 64-17-5
CMF C2 H6 O



IC ICM G03F007-038
ICS G03F007-075; G03F007-004; G03F007-11; G03F007-36; G03F007-30;
G03F007-40
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 35, 38, 76
IT Photoresists
(chemical amplification resist composition containing siloxane
and oxetane structure resin for)
IT 220690-86-8P 370588-70-8P 370590-40-2P 370590-41-3P
370590-43-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(chemical amplification photoresist composition containing)
OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD

(4 CITINGS)

L28 ANSWER 13 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2001:390345 HCAPLUS Full-text
 DOCUMENT NUMBER: 135:12123
 TITLE: Positive-working resist laminate and fine pattern
 forming method using it
 INVENTOR(S): Yasunami, Shoichiro
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001147538	A	20010529	JP 1999-331568	19991122 <--
JP 3967051	B2	20070829		

PRIORITY APPLN. INFO.: JP 1999-331568 19991122 <--

AB In the laminate comprising a support successively coated with 1st resist layer and 2nd resist layer, (i) the 1st resist layer is heat-curable and contains a polymer having a repeating unit $\text{CH}_2\text{R}_1(\text{CO}_2)\text{aL}_1\text{bL}_2\text{cM}$ ($\text{R}_1 = \text{H}$, alkyl, halo; $\text{L}_1\text{-L}_2 = \text{divalent linkage}$; $\text{M} = \text{aromatic ring}$; $\text{a}, \text{b}, \text{c} = 0, 1$) and (ii) the 2nd layer contains (a) a polysiloxane or polysilsesquioxane having an acid-decomposable group and its solubility in an alkali developer increases by the action of an acid, and (b) a compound generating an acid by irradiation of an actinic ray or radiation. The fine pattern is formed by (1) forming the 1st resist layer on the substrate and curing it by heat, (2) forming the 2nd resist layer on the 1st resist layer and patternwise exposing it with an actinic ray or radiation and alkali developing the 2nd layer, and (3) etching the 1st resist layer using the 2nd resist layer as a mask. The laminate is suited for far UV exposure, shows high resolution and gives high accurate fine patterns and is useful for manufacture of semiconductor devices.

IT 199125-55-8

RL: TEM (Technical or engineered material use); USES (Uses)
 (pos.-working resist laminate comprising 1st layer containing acrylic polymer and 2nd layer containing polysiloxane and acid generator)

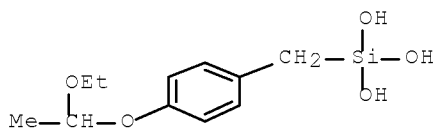
RN 199125-55-8 HCAPLUS

CN Silanetriol, $[[4-(1\text{-ethoxyethoxy})\text{phenyl}]\text{methyl}]\text{-}$, polymer with $[(4\text{-hydroxyphenyl})\text{methyl}]\text{silanetriol}$ (9CI) (CA INDEX NAME)

CM 1

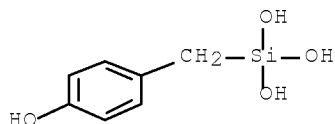
CRN 199125-54-7

CMF C11 H18 O5 Si



CM 2

CRN 188557-76-8
CMF C7 H10 O4 Si



IC ICM G03F007-075
ICS G03F007-039; G03F007-095; G03F007-26
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38, 76
IT Resists
(pos.-working; pos.-working resist laminate comprising 1st layer containing
acrylic polymer and 2nd layer containing polysiloxane and acid generator)
IT 531-18-0, Hexamethylolmelamine 953-91-3, Cyclohexyl p-toluenesulfonate
66003-76-7, Diphenyliodonium trifluoromethanesulfonate 125120-36-7
197447-16-8, Triphenylsulfonium 2,4,6-triisopropylphenylsulfonate
~~199125-55-8~~ 251463-24-8 258341-98-9 287925-55-7,
Triphenylsulfonium p-dodecylphenylsulfonate 341972-63-2D, ethers
341972-64-3 341972-66-5D, ethers 341972-68-7D, ethers and esters
341972-70-1D, ethers ~~341972-71-2~~ 341972-72-3 341972-75-6
341972-77-8 341972-78-9
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working resist laminate comprising 1st layer containing acrylic
polymer and 2nd layer containing polysiloxane and acid generator)
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
(2 CITINGS)

L28 ANSWER 14 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:194854 HCAPLUS Full-text
DOCUMENT NUMBER: 134:238339
TITLE: Polycarbonate compositions with good flowability and
impact and fire resistance, and office machine
 housings using them
INVENTOR(S): Okamoto, Masaya
PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001072847	A	20010321	JP 1999-360226	19991220 <--
JP 4275279	B2	20090610		
TW 570954	B	20040111	TW 2000-89121340	20001012 <--
PRIORITY APPLN. INFO.:			JP 1999-191187	A 19990706 <--
			JP 1999-176305	A 19990623 <--
			JP 1999-360225	A 19991220 <--
			JP 1999-360226	A 19991220 <--

AB The compns. contain aromatic polycarbonate-polyorganosiloxane copolymers
having terminal groups OCO2C6H4R1 (R1 = C10-20 alkyl) and 0.05-1 phr fibril-

10/593004

forming PTFE with average mol. weight $\geq 500,000$. Thus, bisphenol A polycarbonate oligomer was polymerized with phenol-terminated di-Me polysiloxane and terminated with p-dodecylphenol to give polycarbonate-polysiloxane copolymer. A composition comprising 100 parts of the copolymer and 0.3 part Algoflon F 5 (PTFE) showed spiral flow length 34 cm, fire resistance V-0, and Izod impact strength 74 kJ/m².

IT 170791-15-8DF, alkylphenyl-terminated

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(aromatic polycarbonate compns. with good flowability and impact and fire resistance)

RN 170791-15-8 HCAPLUS

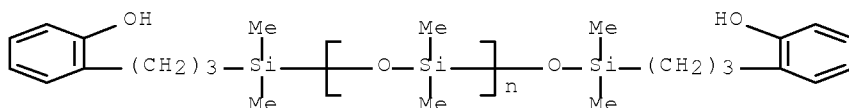
CN Carbonic dichloride, polymer with α -[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]- ω -[[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-(1-methylethyldiene)bis[phenol], block (9CI) (CA INDEX NAME)

CM 1

CRN 158167-48-7

CMF (C2 H6 O Si)_n C22 H34 O3 Si2

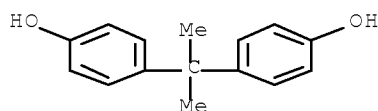
CCI PMS



CM 2

CRN 80-05-7

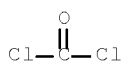
CMF C15 H16 O2



CM 3

CRN 75-44-5

CMF C Cl2 O



IC ICM C08L069-00
ICS C08J005-00; C08L069-00; C08L027-18
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT Impact-resistant materials
(fire-resistant; aromatic polycarbonate compns. with
good flowability and impact and fire resistance)
IT Fire-resistant materials
(impact-resistant; aromatic polycarbonate compns. with
good flowability and impact and fire resistance)
IT 104-43-8DP, p-Dodecylphenol, reaction products with
polycarbonate-polysiloxane 108-95-2DP, Phenol, branched p-dodecyl,
reaction products with polycarbonate-polysiloxane, preparation
170791-15-8DP, alkylphenyl-terminated 315210-48-1DP,
alkylphenyl-terminated
RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer
in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(aromatic polycarbonate compns. with good flowability and impact and fire
resistance)

L28 ANSWER 15 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:194853 HCAPLUS Full-text

DOCUMENT NUMBER: 134:238338

TITLE: Polycarbonate compositions with good flowability and
impact and fire resistance, and office machine
 housings using them

INVENTOR(S): Okamoto, Masaya

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2001072846	A	20010321	JP 1999-360225	19991220 <--
JP 4275278	B2	20090610		
TW 570954	B	20040111	TW 2000-89121340	20001012 <--
PRIORITY APPLN. INFO.:			JP 1999-191188	A 19990706 <--
			JP 1999-176305	A 19990623 <--
			JP 1999-360225	A 19991220 <--
			JP 1999-360226	A 19991220 <--

AB The compns. contain aromatic polycarbonate-polyorganosiloxane copolymers
having terminal groups OCO₂C₆H₅-a(R₁)a (R₁ = C₁-9 alkyl, C₆-20 aryl, halo; a =
0-5), aromatic polycarbonates having terminal groups OCO₂C₆H₄R₂ (R₂ = C₁₀-20
alkyl), and 0.05-1 phr fibril-forming PTFE with average mol. weight ≥500,000.
Thus, bisphenol A polycarbonate oligomer was condensed with phenol-terminated
di-Me polysiloxane and terminated with p-tert-butylphenol to give
polycarbonate-polysiloxane copolymer. A composition comprising the copolymer
33, p-dodecylphenyl-terminated bisphenol A polycarbonate 67, and Algoflon F 5
(PTFE) 0.3 part showed spiral flow length 32 cm, fire resistance V-0, and Izod
impact strength 70 kJ/m².

IT 170791-15-8DP, alkylphenyl-terminated

RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer
in formulation); PRP (Properties); PREP (Preparation); USES (Uses)

(aromatic polycarbonate compns. with good flowability and impact and fire
resistance)

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RN 170791-15-8 HCAPLUS

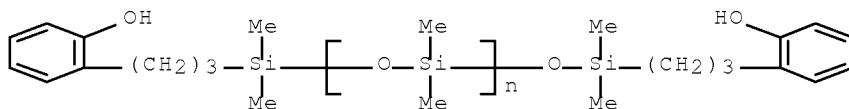
CN Carbonic dichloride, polymer with α -[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]- ω -[[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-(1-methylethyldiene)bis[phenol], block (9CI) (CA INDEX NAME)

CM 1

CRN 158167-48-7

CMF (C2 H6 O Si)_n C22 H34 O3 Si2

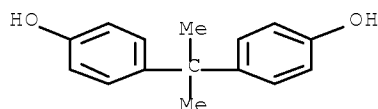
CCI PMS



CM 2

CRN 80-05-7

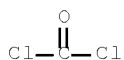
CMF C15 H16 O2



CM 3

CRN 75-44-5

CMF C C12 O



IC ICM C08L069-00

ICS C08L069-00; C08L027-18

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

IT Impact-resistant materials

(fire-resistant; aromatic polycarbonate compns. with good flowability and impact and fire resistance)

IT Fire-resistant materials

(impact-resistant; aromatic polycarbonate compns. with good flowability and impact and fire resistance)

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IT 98-54-4DP, p-tert-Butylphenol, reaction products with polycarbonate-polysiloxane 104-43-8DP, p-Dodecylphenol, reaction products with polycarbonate 108-95-2DP, Phenol, p-branched dedecyl, reaction products with polycarbonate, preparation 599-64-4DP, p-Cumylphenol, reaction products with polycarbonate-polysiloxane 25971-63-5DP, Bisphenol A-phosgene copolymer, alkylphenyl-terminated 170791-15-8DP, alkylphenyl-terminated 315210-48-1DP, alkylphenyl-terminated
 RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
 (aromatic polycarbonate compns. with good flowability and impact and fire resistance)

L28 ANSWER 16 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:17899 HCAPLUS Full-text

DOCUMENT NUMBER: 134:72397

TITLE: Fire- and impact-resistant aromatic polycarbonate resin compositions

INVENTOR(S): Okamoto, Masaya; Nodera, Akio; Kitayama, Masahiro

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2001002907	A	20010109	JP 1999-176305	19990623 <--
JP 4212722	B2	20090121		
US 20030027928	A1	20030206	US 1999-457744	19991210 <--
DE 10050121	A1	20020425	DE 2000-10050121	20001011 <--
TW 570954	B	20040111	TW 2000-89121340	20001012 <--
PRIORITY APPLN. INFO.:			JP 1999-176305	A 19990623 <--
			JP 1999-191187	A 19990706 <--
			JP 1999-191188	A 19990706 <--
			JP 1999-360225	A 19991220 <--
			JP 1999-360226	A 19991220 <--

AB Title compns., useful for housing of office automation (OA) equipments, comprise (A) aromatic polycarbonate-polyorganosiloxanes, (B) polyester-polycarbonates containing aliphatic segments, and (C) 0.05-1 parts (based on 100 parts A + B) polytetrafluoroethylene with average mol. weight $\geq 500,000$ and fibril-forming ability. Thus, a phenol-terminated polydimethylsiloxane prepared from octamethylcyclotetrasiloxane, 1,1,3,3-tetramethyldisiloxane, and 2-allylphenol and a bisphenol A-phosgene oligomer were reacted to give a polymer A. A composition comprising polymer A 33, polymer B prepared from bisphenol A-phosgene oligomer and decandicarboxylic acid 67, and Algoflon F 5 0.3 parts gave spiral flow length 31 cm, flame retardance V-0, and Izod impact strength 70 kJ/m².

IT 158167-48-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

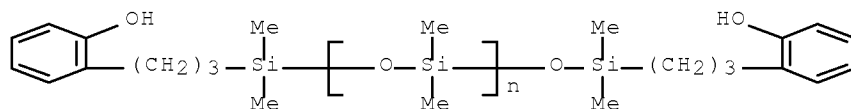
(intermediate; preparation of fire- and impact-resistant aromatic polycarbonate resin compns.)

RN 158167-48-7 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]- ω -[[[3-(2-

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hydroxyphenyl)propyl]dimethylsilyl]oxy]- (CA INDEX NAME)



IC ICM C08L069-00
ICS C08G064-08; C08L067-02; C08L083-04; H05K005-02; C08L069-00;
C08L027-18
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
ST fire impact resistant arom polycarbonate compn
IT 97-53-0DP, Eugenol, reaction products with polydimethylsiloxanes
26761-75-1DP, Allylphenol, reaction products with polydimethylsiloxanes
102411-56-3DP, Octamethylcyclotetrasiloxane-1,1,3,3-tetramethyldisiloxane
copolymer, reaction products with allylphenol or eugenol
158167-48-7P 163617-00-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(intermediate; preparation of fire- and impact-resistant aromatic
polycarbonate
resin compns.)
IT 136541-42-9P 136541-42-9P 170791-15-8P
315210-48-1P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(preparation of fire- and impact-resistant aromatic polycarbonate resin
compns.)

L28 ANSWER 17 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:765533 HCAPLUS Full-text
DOCUMENT NUMBER: 133:310527
TITLE: Polycarbonate compositions with excellent sliding
properties
INVENTOR(S): Kurasawa, Yoshihiro; Obayashi, Naoto; Miyajima,
Takashi
PATENT ASSIGNEE(S): Mitsubishi Engineering Plastic K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000302962	A	20001031	JP 1999-116723	19990423 <--
PRIORITY APPLN. INFO.:			JP 1999-116723	19990423 <--

AB The compns., useful for electronic parts, contain 0-99 parts polycarbonates (A), 1-100 parts polycarbonates (B) having units OQ1R(SiX1X2O)nSiX3X4RQ1OC:O and OQ2BQ3OC:O [R = C2-6 alkylene; X1-4 = C1-20 (hydrogenated) hydrocarbyl; B = C1-10 linear, branched, or cyclic alkylidene, aryl-substituted alkylene, arylene, O, S, CO, SO, SO2; Q1 = phenylene; Q2 = 2-R1-5-R2-substituted 1,4-phenylene; Q3 = 3-R3-5-R4-substituted 1,4-phenylene; R1-4 = H, halo, C1-4

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alkyl], and 0.1-5 parts (on 100 parts A + B) silicone oils with viscosity (η , 25°) $\geq 10,000$ mm²/s. Thus, a test piece comprising S 3000 (bisphenol A polycarbonate) 85, polycarbonate prepared from 2,2-bis(4-hydroxyphenyl)propane, phenol-terminated polydimethylsiloxane, and phosgene 15, and VRS 01 (polydimethylsiloxane, η 6,000,000 mm²/s) showed Izod impact strength 850 J/m, heat distortion temperature 132°, and good abrasion resistance.

IT 191280-18-9P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polycarbonate compns. with good abrasion and impact resistance)

RN 191280-18-9 HCAPLUS

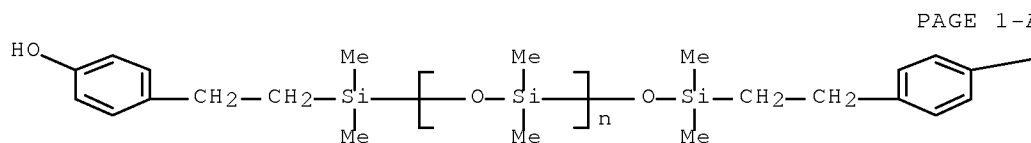
CN Carbonic dichloride, polymer with α -[[2-(4-hydroxyphenyl)ethyl]dimethylsilyl]- ω -[[[2-(4-hydroxyphenyl)ethyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 158133-96-1

CMF (C2 H6 O Si)_n C20 H30 O3 Si2

CCI PMS



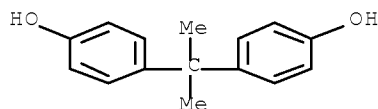
—OH

PAGE 1-B

CM 2

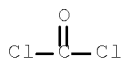
CRN 80-05-7

CMF C15 H16 O2



CM 3

CRN 75-44-5
CMF C C12 O



IC ICM C08L069-00
ICS C08G064-08; C08L069-00; C08L083-04
CC 37-6 (Plastics Manufacture and Processing)
IT Abrasion-resistant materials
Impact-resistant materials
(polycarbonate compns. with good abrasion and impact resistance)
IT 191280-18-9P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polycarbonate compns. with good abrasion and impact resistance)

L28 ANSWER 18 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:551259 HCAPLUS Full-text

DOCUMENT NUMBER: 133:185527

TITLE: Negative-working silicon-containing resist composition for manufacture of semiconductor devices

INVENTOR(S): Lin, Qinghuang; Katnani, Ahmad; La Tulipe, Douglas Charles, Jr.; Seeger, David E.; Brunsvold, William Ross; Ardakani, Ali Afzali

PATENT ASSIGNEE(S): International Business Machines Corp., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000221687	A	20000811	JP 2000-23822	20000201 <--
US 6187505	B1	20010213	US 1999-241441	19990202 <--
US 6344305	B1	20020205	US 2000-654350	20000901 <--
PRIORITY APPLN. INFO.:			US 1999-241441	A 19990202 <--

AB The neg.-working Si-containing resist composition comprises (a) a basic water-soluble Si-containing polymer having a Ph group, (b) a crosslinking agent which bridges the polymers at OH of the PH group, (c) an acid generator, and (d) a solvent.

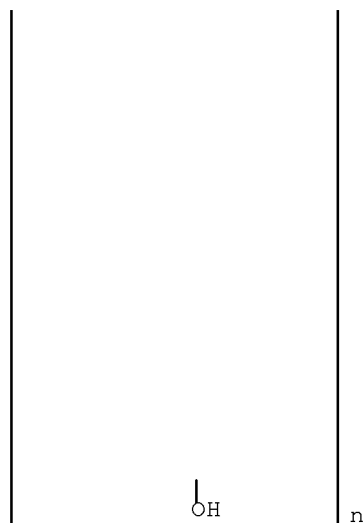
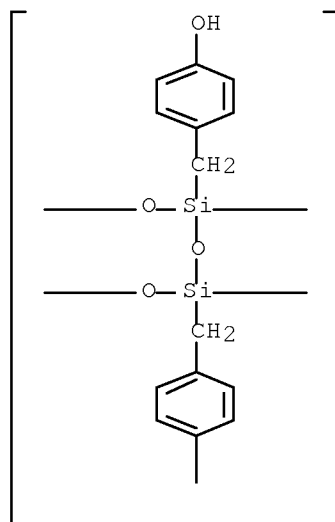
IT 188629-68-7

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(neg.-working silicon-containing resist composition for manufacture of semiconductor devices)

RN 188629-68-7 HCAPLUS

CN Poly[[1,3-bis[(4-hydroxyphenyl)methyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (CA INDEX NAME)



IC ICM G03F007-075
 ICS G03F007-038; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 38, 76
 IT Photoresists
 Semiconductor device fabrication
 (neg.-working silicon-containing resist composition for
 manufacture of semiconductor devices)
 IT Silsesquioxanes
 RL: POF (Polymer in formulation); TEM (Technical or engineered material)

use); USES (Uses)
 (neg.-working silicon-containing resist composition for
 manufacture of semiconductor devices)
 IT 91-44-1, Coumarin-1 194861-06-8 213740-80-8 288268-25-7
 RL: CAT (Catalyst use); USES (Uses)
 (neg.-working silicon-containing resist composition for
 manufacture of semiconductor devices)
 IT 188629-68-7
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (neg.-working silicon-containing resist composition for
 manufacture of semiconductor devices)
 IT 17464-88-9
 RL: CAT (Catalyst use); USES (Uses)
 (powder link; neg.-working silicon-containing resist
 composition for manufacture of semiconductor devices)
 OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD
 (11 CITINGS)

L28 ANSWER 19 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1999:183813 HCAPLUS Full-text
 DOCUMENT NUMBER: 130:283022
 TITLE: Thermal-transfer recording sheets with good storage
 stability at high temperature
 INVENTOR(S): Nakai, Toshimitsu; Torii, Hisanori; Kato, Satoshi
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11070747	A	19990316	JP 1998-110323	19980421 <--
PRIORITY APPLN. INFO.:			JP 1997-175591	A 19970701 <--

AB The sheets with freedom from wrinkling caused by printing at high temperature
 comprise a base film which bears a heat-resistant slip layer on 1 side and
 colored layers on the other side where the heat-resistant slip layer is
 obtained from resins containing polycarbonates bearing grafted polysiloxane
 moieties. Thus, coating a mixture containing 80 parts polycarbonate having 5%
 units derived from carbonic acid and bisphenol A compound bearing
 $\text{Me}_3\text{Si}(\text{OSiMe}_2)_m\text{CH}_2\text{CH}_2\text{CH}_2$ (m = integer so that viscosity-average mol. weight=
 30,000) group adjacent to phenolic OH group, and units derived from carbonic
 acid and bisphenol AP, and 20 parts Vylon 200 on 1 side of a biaxially-
 oriented PET polyester film to dry thickness of .apprx.1 μm , drying at 120°
 for 1 min, coating a mixture containing a blue sublimation-type colorant 60,
 phenoxy resin 100, i-PrOH 400, and MEK 400 parts on the other side of the film
 to dry thickness of .apprx.1 μm and drying gave a thermal-transfer printing
 sheet.
 IT 220225-23-0
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (heat-resistant coating for thermal-transfer printing sheets with good
 storage stability at high temperature)
 RN 220225-23-0 HCAPLUS
 CN Carbonic acid, polymer with 4,4'-cyclohexylidenebis[phenol] and
 α, α' -(1-methylethylidene)bis[(6-hydroxy-3,1-phenylene)-3,1-

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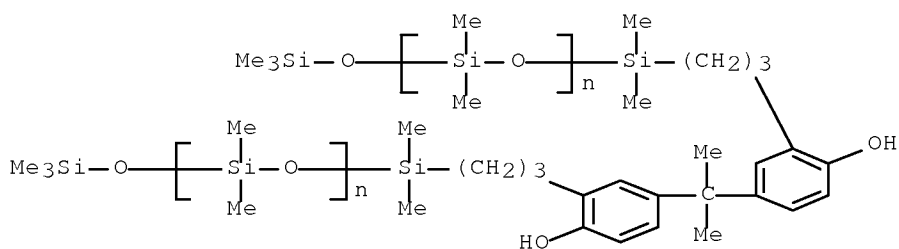
propanediyl(dimethylsilylene)]bis[ω-
[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)]], graft (9CI) (CA INDEX
NAME)

CM 1

CRN 188202-31-5

CMF (C2 H6 O Si)_n (C2 H6 O Si)_n C31 H56 O4 Si4

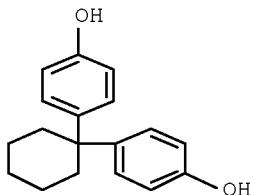
CCI PMS



CM 2

CRN 843-55-0

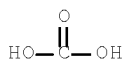
CMF C18 H20 O2



CM 3

CRN 463-79-6

CMF C H2 O3



IC ICM B41M005-38

ICS B32B027-00; B32B027-36; B41M005-40; C08G064-18; C08G077-448

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74

IT 37337-82-9, Vylon 200

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RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(coating ~~compos.~~; heat-resistant coating for thermal-transfer printing sheets with good storage stability at high temperature)

IT 220225-23-0 222045-07-0 222045-09-2D,
trimethylsilyl-terminated 222045-12-7D, trimethylsilyl-terminated
222045-13-8 222045-14-9D, trimethylsilyl-terminated
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(heat-resistant coating for thermal-transfer printing sheets with good storage stability at high temperature)

L28 ANSWER 20 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:259677 HCAPLUS Full-text
DOCUMENT NUMBER: 128:295450
ORIGINAL REFERENCE NO.: 128:58561a,58564a
TITLE: Abrasion-resistant
polycarbonate-polysiloxane compositions
INVENTOR(S): Ogawa, Noriyoshi; Tajima, Jun
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Inc., Japan
SOURCE: Ger. Offen., 26 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 19745591	A1	19980423	DE 1997-19745591	19971006 <--
JP 10158379	A	19980616	JP 1997-224257	19970806 <--
JP 3791641	B2	20060628		
JP 10158499	A	19980616	JP 1997-224258	19970806 <--
JP 3791642	B2	20060628		
US 5916980	A	19990629	US 1997-943158	19971003 <--
PRIORITY APPLN. INFO.:			JP 1996-281904	A 19961003 <--
			JP 1996-281905	A 19961003 <--
			JP 1997-224257	A 19970806 <--
			JP 1997-224258	A 19970806 <--

AB The title compns., with good transparency, contain polycarbonates prepared from siloxanes of specified structure, bisphenols, and H2CO3 precursors; and 0-20% diorganopolysiloxanes. A polycarbonate prepared by polymerization of 91.2 g bisphenol A and 13.2 g di-Me polysiloxane (d.p. 40) bearing two (2-hydroxyphenyl)propyl groups/chain with COCl2 had intrinsic viscosity 0.89 dL/g, transparency 90.4%, and Taber abrasion (1 kg load) 2, 6, 16, and 34 mg after 4, 12, 24, and 48 h, resp.; vs. 0.64, 90.7, 6, 17, 32, and 67, resp., for bisphenol A polycarbonate.

IT 206114-16-1F
RL: IMF (Industrial manufacture); PREP (Preparation)
(abrasion-resistant polycarbonate-polysiloxane ~~compos~~
.)

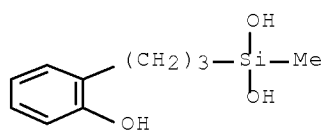
RN 206114-16-1 HCAPLUS
CN Carbonic dichloride, polymer with dimethylsilanediol,
[3-(2-hydroxyphenyl)propyl]methylsilanediol and
4,4'-(1-methylethylidene)bis[phenol], block (9CI) (CA INDEX NAME)

CM 1

CRN 170368-25-9

10/593004

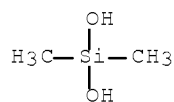
CMF C10 H16 O3 Si



CM 2

CRN 1066-42-8

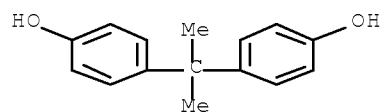
CMF C2 H8 O2 Si



CM 3

CRN 80-05-7

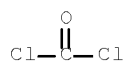
CMF C15 H16 O2



CM 4

CRN 75-44-5

CMF C C12 O



IC ICM C08L069-00

ICS C08L083-04; C08J005-18; C08G077-448; C08G064-18; C08G064-24

ICI C08L069-00, C08L083-04

CC 37-6 (Plastics Manufacture and Processing)

IT Polysiloxanes, uses

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RL: POF (Polymer in formulation); USES (Uses)
(blends with polycarbonate-polysiloxanes; abrasion-resistant
polycarbonate-polysiloxane compns.)

IT Polysiloxanes, preparation
Polysiloxanes, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(polycarbonate-; abrasion-resistant
polycarbonate-polysiloxane compns.)

IT Polymer blends
RL: POF (Polymer in formulation); USES (Uses)
(polysiloxane blends with polycarbonate-polysiloxanes; abrasion-
resistant polycarbonate-polysiloxane compns.)

IT Polycarbonates, preparation
Polycarbonates, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(polysiloxane-; abrasion-resistant polycarbonate-polysiloxane
compns.)

IT 206114-16-1P 206114-17-2P 206114-18-3P
206114-19-4P 206114-20-7P 206114-22-9P
RL: IMF (Industrial manufacture); PREP (Preparation)
(abrasion-resistant polycarbonate-polysiloxane compns
.)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD
(4 CITINGS)

L28 ANSWER 21 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:115342 HCAPLUS Full-text
DOCUMENT NUMBER: 128:174149
ORIGINAL REFERENCE NO.: 128:34197a,34200a
TITLE: High-contrast photoresist comprising acid-sensitive
crosslinked polymeric resins
INVENTOR(S): Huang, Wu-Song; Linde, Harold George; Whiting, Charles
Arthur
PATENT ASSIGNEE(S): International Business Machines Corp., USA
SOURCE: U.S., 13 pp., Cont.-in-part of U.S. Ser. No. 71,095,
abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 5712078	A	19980127	US 1995-476793	19950607 <--
JP 07140666	A	19950602	JP 1994-93265	19940502 <--
JP 10182989	A	19980707	JP 1997-252492	19970917 <--
JP 3014350	B2	20000228		
PRIORITY APPLN. INFO.:			US 1993-71095	B2 19930604 <--
			JP 1994-93265	A3 19940502 <--

AB Acid-sensitive polymeric compns., improved chemical amplified microlithog.
resist compns. comprising the acid-sensitive polymeric compns., and methods
for the preparation and use thereof are disclosed. The compns. comprise, in
admxt., a polymeric binder, an acid-labile compound which provides selective
aqueous base solubility upon cleavage, and a compound that generates acid upon
exposure to imaging radiation. More particularly, the compns. have one or
more acid-labile ketal groups, which may be chemical linked to a polymeric
resin or which may be incorporated into a sep. component to form a dissoln.
inhibitor. Crosslinking of the polymer to produce a high-mol.-weight,
nonpolar resin may also occur by ketal exchange. Upon exposure, mol. weight

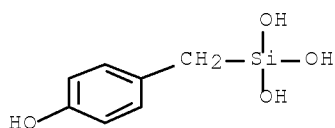
10/593004

and polarity changes of the crosslinked resin produce high contrast during development. The comps. exhibit reduced sensitivity to environmental contaminants when compared to known acid-amplified resist comps. and may optionally be processed without a post exposure bake step. Such comps. are especially useful in the fabrication of integrated circuit devices by microlithog. techniques.

IT	188557-77-9D, reaction products with 2-methoxypropene RL: TEM (Technical or engineered material use); USES (Uses) (high-contrast photoresists containing)
RN	188557-77-9 HCAPLUS
CN	Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 188557-76-8
CMF C7 H10 O4 Si



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IC      ICM  G03C001-73
INCL   430270100
CC      74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
        Reprographic Processes)
IT      188557-77-9D, reaction products with 2-methoxypropene
        188629-68-7D, reaction products with 2-methoxypropene
        RL: TEM (Technical or engineered material use); USES (Uses)
            (high-contrast photoresists containing)
OS.CITING REF COUNT:      21      THERE ARE 21 CAPLUS RECORDS THAT CITE THIS
                                RECORD (21 CITINGS)
REFERENCE COUNT:          31      THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

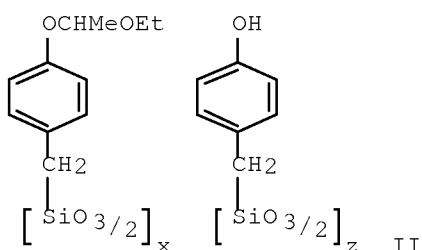
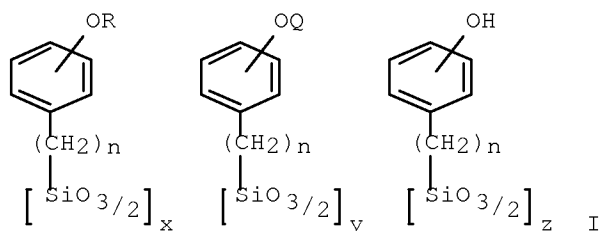
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L28 ANSWER 22 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:692361 HCAPLUS Full-text
DOCUMENT NUMBER: 128:17350
ORIGINAL REFERENCE NO.: 128:3275a,3278a
TITLE: Chemical amplification positive-working resist
containing hydroxybenzyl silsesquioxane derivative
INVENTOR(S): Tsuchiya, Junji; Ishihara, Toshinobu; Nagura,
Shigehiro; Takemura, Katsuya; Yamaoka, Tsugio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09274319	A	19971021	JP 1996-104589	19960402 <--
JP 3518158	B2	20040412		
TW 574627	B	20040201	TW 1996-85116032	19961223 <--

10/593004

US 5882844 A 19990316 US 1997-831301 19970401 <--
 KR 228466 B1 19991101 KR 1997-12010 19970401 <--
 PRIORITY APPLN. INFO.: JP 1996-104589 A 19960402 <--
 GI



AB The title material contains (a) an organic solvent, (b) a polymer with weight average mol. weight (Mw) 2000- 50,000 having a repeating unit I [R = CR1R2OR3 (R1, R2 = H, C1-6 straight chain or branched alkyl; R3 = C1-10 straight chain, branched or cyclic alkyl, R2 and R3 may link to form a ring); Q = acid-labile group; $0.05 \leq x/(x + y + z) \leq 0.8$, $0 \leq y/(x + y + z) \leq 0.5$, $0.2 \leq z/(x + y + z) \leq 0.95$; $n = 1-3$] as a base resin, (c) an acid-generating agent, (d) a compound having ≥ 2 vinyl ether groups in its mol., and optionally (e) a compound with mol. weight 100- 1000 having in its mol. ≥ 2 phenolic OH groups of which the H atoms are substituted for acid-labile groups in a ratio of 10-100 % in average, and (f) a compound with mol. weight 1000-3000 having in its mol. a phenolic OH group of which the H atom is substituted for the group in a ratio of 0-60 % in average as dissoln. inhibitor. The material shows high sensitivity toward high energy rays such as far UV rays, electron beams, and x-ray and provides high resolution patterns by development with alkaline aqueous solns. Thus, polymer II [$x/(x + y) = 0.30$], (p-tert-BuOC6H4)3S+. p-MeC6H4SO3-, and [p-CH2:CHO(CH2)2OC6H4]2CMe2 were dissolved in propylene glycol monomethyl ether acetate to give a resist solution

IT 199125-55-8

RL: TEM (Technical or engineered material use); USES (Uses)
 (chemical amplification resist composition containing
 hydroxybenzyl silsesquioxane derivative and vinyl ether compound)

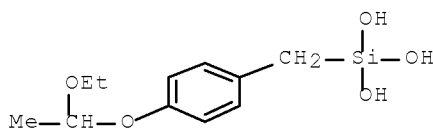
RN 199125-55-8 HCAPLUS

CN Silanetriol, [[4-(1-ethoxyethoxy)phenyl]methyl]-, polymer with
 [(4-hydroxyphenyl)methyl]silanetriol (9CI) (CA INDEX NAME)

CM 1

CRN 199125-54-7

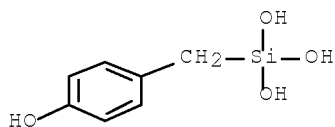
CMF C11 H18 O5 Si



CM 2

CRN 188557-76-8

CMF C7 H10 O4 Si



IC ICM G03F007-039
 ICS G03F007-004; G03F007-029; G03F007-033; G03F007-075; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT Silsesquioxanes
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chemical amplification resist composition containing
 hydroxybenzyl silsesquioxane derivative and viny ether compound)
 IT Resists
 (pos.-working; chemical amplification resist composition
 containing hydroxybenzyl silsesquioxane derivative and viny ether compound)
 IT 52411-04-8 150610-15-4 199125-55-8 199125-57-0
 199125-59-2 199125-61-6 199125-63-8
 199125-64-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chemical amplification resist composition containing
 hydroxybenzyl silsesquioxane derivative and viny ether compound)
 IT 117458-06-7 123589-22-0 129674-22-2 162102-77-4
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (dissoln. inhibitor; chemical amplification resist compn
 . containing hydroxybenzyl silsesquioxane derivative and viny ether
 compound)
 OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS
 RECORD (19 CITINGS)

L28 ANSWER 23 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:483281 HCAPLUS Full-text

DOCUMENT NUMBER: 127:96055

ORIGINAL REFERENCE NO.: 127:18500h,18501a

TITLE: Silicone-modified compounds, silicone-modified epoxy
 resins, epoxy resin compositions and their cured
 products

10/593004

INVENTOR(S): Akatsuka, Yasumasa; Hasegawa, Ryoichi; Takahashi, Nobuo; Mori, Naomi
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

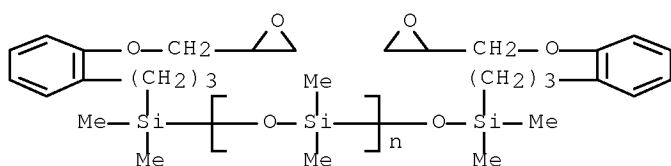
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09143344	A	19970603	JP 1995-325232	19951121 <--
PRIORITY APPLN. INFO.:			JP 1995-325232	19951121 <--

AB The title compds. (A) are derived from the reaction between bisphenol compds. with the adducts of allyl group-containing epoxy compds. and SiH group-terminated organopolysiloxanes, and the modified epoxy resins (B) are derived from the reaction of the A compds. with ordinary epoxy resins. Epoxy resin compns. with good cured heat and crack resistance are formulated from the A or/and B, and curing agents. Thus, an adduct of o-allylphenyl glycidyl ether with HSiMe₂-terminated di-Me siloxane was prepared, combined with bisphenol A, Ph3P and MIBK, and heated at reflux to give a liquid silicone-modified epoxy resin (I). A curable composition was formulated from the I 10, Epikote 828 180, Kayahard MCD 153, a curing accelerator 1.8, silica powder 800, stearic acid 4 and silane coupler 5 parts.

IT 180423-86-3F, Dimethylsilanediol homopolymer, sru,
 3-(o-glycidoxyphenyl)propyl-terminated
 RL: POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (addition reaction in manufacture of silicone-modified compds. for use with epoxy resin)

RN 180423-86-3 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[dimethyl[3-[2-(oxiranylethoxy)phenyl]propyl]silyl]- ω -[[dimethyl[3-[2-(oxiranylethoxy)phenyl]propyl]silyl]oxy]- (9CI) (CA INDEX NAME)



IC ICM C08L063-00

ICS C08G059-30; C08G077-38; C08K003-00

CC 37-6 (Plastics Manufacture and Processing)

IT 180423-86-3F, Dimethylsilanediol homopolymer, sru,

3-(o-glycidoxyphenyl)propyl-terminated

RL: POF (Polymer in formulation); RCT (Reactant); SPN (Synthetic

preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(addition reaction in manufacture of silicone-modified compds. for use with epoxy resin)

IT 192189-03-0, o-Allylphenyl glycidyl ether-bisphenol

A-dimethylsilyl-terminated di-methyl siloxane-epichlorohydrin-Kayahard MCD copolymer 192189-04-1, o-Allylphenyl glycidyl ether-bisphenol

Section cross-reference(s): 74

IT Resists

(pos.-working; polysiloxane and pos.-type resist material)

IT 107-30-2DP, Chloromethyl methyl ether, reaction products with hydroxybenzyl silsesquioxane 109-53-5DP, Iso-butyl vinyl ether, reaction products with hydroxybenzyl silsesquioxane 109-92-2DP, Ethyl vinyl ether, reaction products with hydroxybenzyl silsesquioxane 111-34-2DP, n-Butyl vinyl ether, reaction products with hydroxybenzyl silsesquioxane 926-02-3DP, tert-Butyl vinyl ether, reaction products with hydroxybenzyl silsesquioxane 1191-99-7DP, 2,3-Dihydrofuran, reaction products with hydroxybenzyl silsesquioxane 4525-32-0DP, Dibutyl dicarbonate, reaction products with hydroxybenzyl silsesquioxane 188557-77-9DP, reaction products with ethers 188629-68-7DP, reaction products with ethers

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polysiloxane and pos.-type resist material)

OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)

L28 ANSWER 25 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:75294 HCAPLUS Full-text

DOCUMENT NUMBER: 126:257418

ORIGINAL REFERENCE NO.: 126:49669a,49672a

TITLE: Direct patterning of spin-on-glass materials by ArF excimer laser irradiation and their new application to hard-mask processes

AUTHOR(S): Morisawa, Taku; Fukuda, Hiroshi

CORPORATE SOURCE: Central Research Laboratory, Hitachi, Ltd., Tokyo, 185, Japan

SOURCE: Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1996), 35(12B), 6366-6369

CODEN: JAPNDE; ISSN: 0021-4922

PUBLISHER: Japanese Journal of Applied Physics

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several spin-on-glass (SOG) materials were examined as single layer resists for ArF excimer laser lithog., with the goal of directly forming a hard mask from these materials for dry-etching underlying metal films. Perhydro-silazane (PHSN) was found to be photo-reactive at 193 nm wavelength as well as polyphenylmethyl-silsesquioxane (PMSQ) and polyhydroxybenzyl-silsesquioxane (HSQ), which we have reported previously. These materials showed a sufficient resolution performance and sensitivity at 193 nm. The Fourier-transform IR (FTIR) and X-ray photoelectron spectrometry (XPS) analyses showed that the basic reaction is photo-oxidation, though the imaging mechanism in each material is quite different. The etching resistance of these materials was significantly improved by special treatment after patterning, whereas those without the treatment were insufficient. For example, etching rate of PHSN after baking in steam ambient was comparable to that for CVD SiO₂ in RIE using SF₆ gas. 0.2 μm patterns were transferred into poly-Si films by dry-etching using these materials as hard masks.

IT 188557-77-9

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)

(direct patterning of spin-on-glass materials by ArF excimer laser irradiation and their application to hard-mask processes)

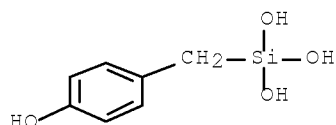
RN 188557-77-9 HCAPLUS

CN Silanetriol, 1-[(4-hydroxyphenyl)methyl]-, homopolymer (CA INDEX NAME)

CM 1

CRN 188557-76-8

CMF C7 H10 O4 Si



CC 76-3 (Electric Phenomena)
 Section cross-reference(s): 74

IT Annealing
 Integrated circuits
 Laser radiation
 Photomasks (lithographic masks)
 Resists
 Silazanes
 Silsesquioxanes
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
 (direct patterning of spin-on-glass materials by ArF excimer laser irradiation and their application to hard-mask processes)

IT 92068-44-5 188557-77-9 188629-68-7
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
 (direct patterning of spin-on-glass materials by ArF excimer laser irradiation and their application to hard-mask processes)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)

L28 ANSWER 26 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:588311 HCAPLUS Full-text

DOCUMENT NUMBER: 125:223554

ORIGINAL REFERENCE NO.: 125:41785a, 41788a

TITLE: Noncombustible siloxane-modified polycarbonate compositions resistant to dripping in burning

INVENTOR(S): Nodera, Akio; Okamoto, Masaya; Takarada, Mitsuhiro; Kizaki, Hiroaki; Kumagai, Kimitaka

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co, Japan; Shinetsu Chemical Industry Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08176427	A	19960709	JP 1994-319690	19941222 <--
JP 3151789	B2	20010403		
PRIORITY APPLN. INFO.:			JP 1994-319690	19941222 <--

AB The title compns. contain (A) 100 parts $\geq 0.1\%$ organopolysiloxane unit-containing resins comprising (a) 1-100% aromatic polycarbonate copolymers with 0.1-20% [(R1)3SiO0.5]a[(R2)2SiO]b[R3SiO1.5]c[SiO2]d (R1-3 = C1-12 hydrocarbyl, phenolic OH-containing group; 1 mol. contains ≥ 2 the phenolic OH-containing group; $0 \leq a \leq 0.75$; $0 \leq b < 1$; $0 \leq c \leq 0.5$; $0 \leq d \leq 0.25$; $a + b + c + d = 1$; excluding $c = d = 0$) and (b) 99-0% aromatic polycarbonates and (B) 0-1 part organic alkali metal and/or alkaline earth metal salts. Thus, o-HOC6H4(CH2)3[Me2SiO]2SiPh[OSiMe2(CH2)3C6H4OH-o]SiPh2OSiMe2(CH2)3C6H4OH-o was polymerized with polycarbonate oligomer (prepared from bisphenol A and COCl2) to give a copolymer containing 1% siloxane unit, which showed O index 31, fire resistance rating V-1, no dripping, and haze 3.

IT 181355-34-08

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(noncombustible siloxane-modified polycarbonate compns.
resistant to dripping in burning)

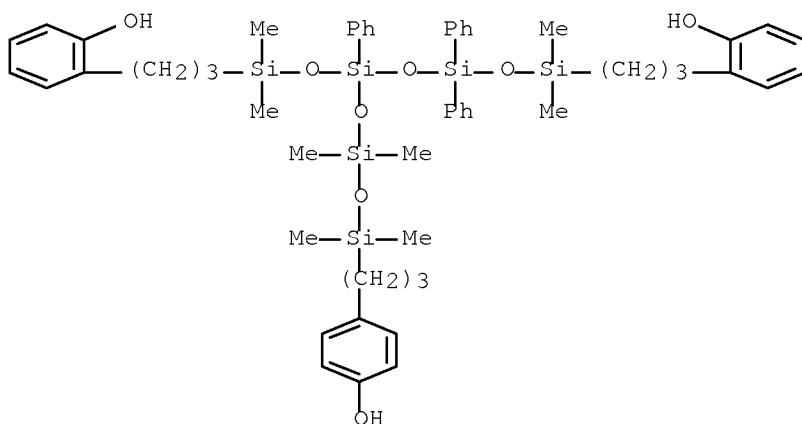
RN 181355-34-0 HCAPLUS

CN Carbonic dichloride, polymer with 2,2'-[[3-[[3-[3-(4-hydroxyphenyl)propyl]-1,1,3,3-tetramethyldisiloxanyl]oxy]-1,1,7,7-tetramethyl-3,5,5-triphenyl-1,7-tetrasiloxanediyl]di-3,1-propanediyl]bis[phenol] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 181355-33-9

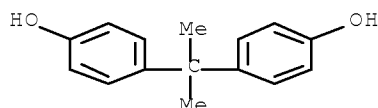
CMF C53 H72 O8 Si6



CM 2

CRN 80-05-7

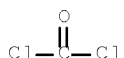
CMF C15 H16 O2



CM 3

CRN 75-44-5

CMF C Cl2 O



IC ICM C08L069-00
 ICS C08L069-00; C08G064-08; C08G077-448; C08K005-098; C08K005-42;
 C08K005-521; C08L083-10

ICI C08L069-00, C08L083-10

CC 37-6 (Plastics Manufacture and Processing)

IT Carbonates, uses
 Phosphates, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agents; noncombustible siloxane-modified polycarbonate
 compns. resistant to dripping in burning)

IT Fire-resistant materials
 (noncombustible siloxane-modified polycarbonate compns.
 resistant to dripping in burning)

IT Fireproofing agents
 (organic alkali or alkaline earth salts; noncombustible siloxane-modified
 polycarbonate compns. resistant to dripping in
 burning)

IT Siloxanes and Silicones, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); PREP (Preparation); USES (Uses)
 (polycarbonate-, noncombustible siloxane-modified polycarbonate
 compns. resistant to dripping in burning)

IT Polycarbonates, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); PREP (Preparation); USES (Uses)
 (siloxane-, noncombustible siloxane-modified polycarbonate
 compns. resistant to dripping in burning)

IT 29420-49-3, Megafac F 114 63316-43-8, KSS (sulfonic acid)
 RL: MOA (Modifier or additive use); USES (Uses)
 (fireproofing agents; noncombustible siloxane-modified polycarbonate
 compns. resistant to dripping in burning)

IT 181355-34-0P 181355-36-2P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); PREP (Preparation); USES (Uses)
 (noncombustible siloxane-modified polycarbonate compns.
 resistant to dripping in burning)

IT 24936-68-3, Toughlon A 2200, properties 25037-45-0, Bisphenol A-carbonic
 acid copolymer
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (noncombustible siloxane-modified polycarbonate compns.
 resistant to dripping in burning)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD
 (2 CITINGS)

L28 ANSWER 27 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:566810 HCAPLUS Full-text

DOCUMENT NUMBER: 125:208439

ORIGINAL REFERENCE NO.: 125:38753a

TITLE: Alkali-developable positive resist material

INVENTOR(S): Takemura, Katsuya; Tsucha, Junji; Ishihara, Toshinobu;
Tanaka, Haruyori; Kawai, Yoshio; Nakamura, JiroPATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon
Telegraph & Telephone

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08160623	A	19960621	JP 1994-331724	19941209 <--
JP 3175514	B2	20010611		

PRIORITY APPLN. INFO.: JP 1994-331724 19941209 <--

AB The material contains a silicone polymer
 $[\text{Si}(\text{CH}_2\text{CH}_2\text{CO}_2\text{Q})_0.3/2]_x[\text{Si}(\text{CH}_2\text{CH}_2\text{CO}_2\text{H})_0.3/2]_m$ (Q = tert-Bu, tert-butoxycarbonylmethyl, Me₃Si, tetrahydropyranyl; n = 1-3; x + m = 1; x ≠ 0) and an acid-generating agent, RpJM (R = aromatic group; ≥1 R = R₁CO-, tert-butoxycarbonyloxy-, or tert-butoxycarbonylmethoxy-substituted phenyl; R₁ = C₁-10 hydrocarbyl; J = sulfonium or iodonium; M = tosyl or triflate; p = 2,3). The material showed high resolution and sensitivity and good O-plasma etching resistance.

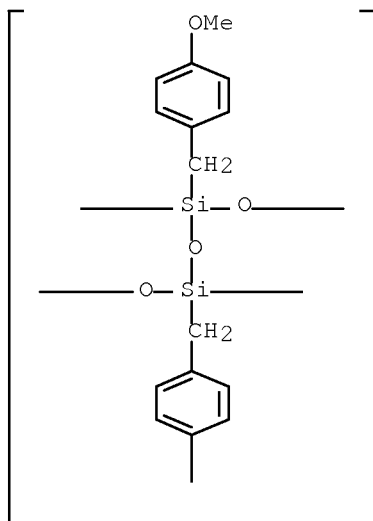
IT 161099-32-7P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (alkali-developable silicone pos. resist material with high sensitivity and resolution)

RN 161099-32-7 HCAPLUS

CN Poly[[1,3-bis[(4-methoxyphenyl)methyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (CA INDEX NAME)

PAGE 1-A





IC ICM G03F007-039
 ICS G03F007-004; G03F007-029; G03F007-075; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT ~~Resists~~
 (photo-, alkali-developable silicone pos. resist material with high
 sensitivity and resolution)
 IT 75-77-4DP, Trimethylsilyl chloride, reaction products with silsesquioxanes
 161099-32-7P 181036-41-9DP, hydrolyzed, ester with tert-Bu
 bromoacetate 181036-41-9DP, reaction products with tert-Bu alc. and
 trimethylsilyl chloride 181191-68-4DP, hydrolyzed, ester with tert-Bu
 bromoacetate and dihydropyran and reaction products with trimethylsilyl
 chloride
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (alkali-developable silicone pos. resist material with high sensitivity
 and resolution)

L28 ANSWER 28 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1996:566807 HCAPLUS Full-text
 DOCUMENT NUMBER: 125:208437
 ORIGINAL REFERENCE NO.: 125:38749a, 38752a
 TITLE: Alkali-developable positive resist material
 INVENTOR(S): Takemura, Katsuya; Tsucha, Junji; Ishihara, Toshinobu;
 Tanaka, Haruyori; Kawai, Yoshio; Nakamura, Jiro
 PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon
 Telegraph & Telephone
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08160620	A	19960621	JP 1994-331720	19941209 <--
JP 3235388	B2	20011204		
TW 397936	B	20000711	TW 1995-84112843	19951201 <--
US 5612170	A	19970318	US 1995-569659	19951208 <--
KR 212933	B1	19990802	KR 1995-48056	19951209 <--
PRIORITY APPLN. INFO.:			JP 1994-331720	A 19941209 <--
			JP 1994-331721	A 19941209 <--
			JP 1994-331722	A 19941209 <--

OTHER SOURCE(S): MARPAT 125:208437

AB The material contains a silicone polymer
[Si[C(C6H4OQ)H2]nO3/2]x[Si[C(C6H4OH)H2]nO3/2]m (Q = tert-butoxycarbonyl, tert-butoxycarbonylmethyl, Me3Si, tetrahydropyranyl; n = 1-3; x + m = 1; x ≠ 0) and an onium salt acid-generating agent RpJM (R = aromatic group; ≥1 R = R13CO-, tert-butoxycarbonyloxy-, or tert-butoxycarbonylmethoxy-substituted phenyl; R1 = C1-10 hydrocarbyl; J = sulfonium or iodonium; M = p-toluenesulfonate or trifluoromethanesulfonate; p = 2, 3). The material showed high resolution and sensitivity and good O-plasma etching resistance.

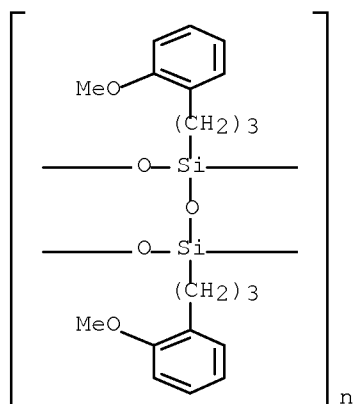
IT 158445-31-9DP, derivs.

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable silicone pos. resist material containing onium acid generator)

RN 158445-31-9 HCAPLUS

CN Poly[[1,3-bis[3-(2-methoxyphenyl)propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



IC ICM G03F007-039

ICS G03F007-004; G03F007-029; G03F007-075; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT Resists

(photo-, alkali-developable silicone pos. resist material containing onium acid generator)

IT 75-77-4DP, Trimethylsilyl chloride, reaction products with silsesquioxanes
5292-43-3DP, tert-Butyl bromoacetate, reaction products with

10/593004

silsesquioxanes 24424-99-5DP, Di-tert-butyl dicarbonate, reaction products with silsesquioxanes 25512-65-6DP, Dihydropyran, reaction products with silsesquioxanes 158360-73-7DP, derivs. 158360-74-8DP, derivs. 158445-31-9DP, derivs. 158445-32-0DP, derivs. 161055-58-9DP, derivs. 161099-32-7DP, derivs.

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable silicone pos. resist material containing onium acid generator)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L28 ANSWER 29 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:557390 HCAPLUS Full-text

DOCUMENT NUMBER: 125:181341

ORIGINAL REFERENCE NO.: 125:33713a,33716a

TITLE: Alkali-developable positive resist material

INVENTOR(S): Takemura, Katsuya; Tsucha, Junji; Ishihara, Toshinobu; Tanaka, Haruyori; Kawai, Yoshio; Nakamura, Jiro
PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon Telegraph & Telephone

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08160605	A	19960621	JP 1994-331722	19941209 <--
JP 3094819	B2	20001003		
TW 397936	B	20000711	TW 1995-84112843	19951201 <--
US 5612170	A	19970318	US 1995-569659	19951208 <--
KR 212933	B1	19990802	KR 1995-48056	19951209 <--
PRIORITY APPLN. INFO.:			JP 1994-331720	A 19941209 <--
			JP 1994-331721	A 19941209 <--
			JP 1994-331722	A 19941209 <--

OTHER SOURCE(S): MARPAT 125:181341

GI For diagram(s), see printed CA Issue.

AB The material contains a silicone polymer
[Si[C(C6H4OQ)H2]nO3/2]x[Si[C(C6H4OH)H2]nO3/2]m (Q = tert-butoxycarbonyl, tert-butoxycarbonylmethyl, Me3Si, tetrahydropyranyl; n = 1-3; x + m = 1; x ≠ 0), an acid generating agent, and a dissoln.-preventing agent
R2R12Si(OSiR12)aOSiR2R12, X(OSiR1R2)bOX, or I (R1 = Me, Ph; R2 = carboxyethyl, p-hydroxyphenylalkyl; X = Me3Si, Ph3Si, SiR12R2; a = 0-50; b = 1-50; c = 3-10), whose CO2H or OH is protected by tert-Bu group or tert-butoxycarbonylmethyl group. The material showed high resolution and sensitivity and good O-plasma etching resistance.

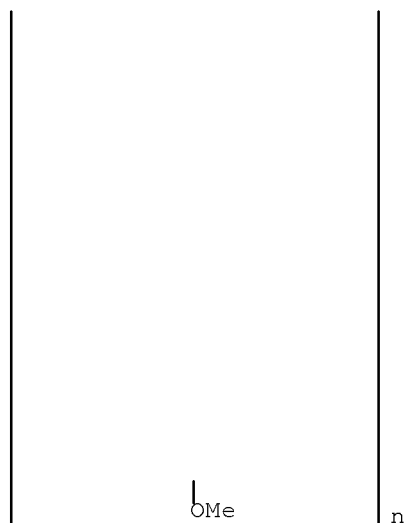
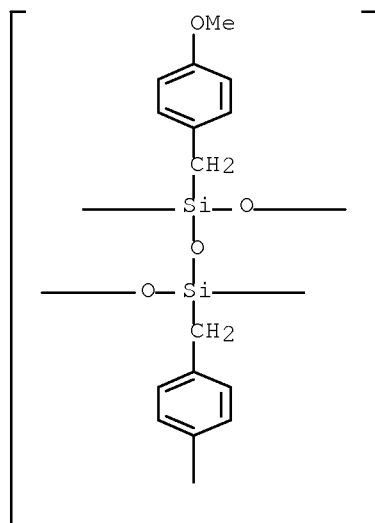
IT 161099-32-7DP, derivs.

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable silicone pos. resist material with high sensitivity and resolution)

RN 161099-32-7 HCAPLUS

CN Poly[[1,3-bis[(4-methoxyphenyl)methyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (CA INDEX NAME)



IC ICM G03F007-004
 ICS G03F007-004; G03F007-029; G03F007-039; G03F007-075; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT Resists
 (photo-, alkali-developable silicone pos. resist material with high
 sensitivity and resolution)
 IT 75-77-4DP, Trimethylsilyl chloride, reaction products with silsesquioxanes
 5292-43-3DP, tert-Butyl bromoacetate, reaction products with
 silsesquioxanes 24424-99-5DP, Di-tert-butyl dicarbonate, reaction
 products with silsesquioxanes 25512-65-6DP, Dihydropyran, reaction

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products with silsesquioxanes 26403-67-8DP, Methyl hydrogen siloxane, trimethylsilyl-terminated, reaction products with butoxystyrene 49718-23-2DP, Methylsilanediol homopolymer, trimethylsilyl-terminated, reaction products with butoxystyrene 95418-58-9DP, p-tert-Butoxystyrene, reaction products with siloxanes 152266-34-7P 161055-58-9DP, derivs. 161099-32-7DP, derivs. 175032-79-8P 180890-92-0DP, trimethylsilyl-terminated, esters 180890-93-1P, Poly[(2-carboxyethyl)methylsilylene] 180890-95-3P 180890-96-4P 180890-98-6P 180890-99-7P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable silicone pos. resist material with high sensitivity and resolution)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L28 ANSWER 30 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:545608 HCAPLUS Full-text

DOCUMENT NUMBER: 125:181345

ORIGINAL REFERENCE NO.: 125:33713a,33716a

TITLE: Alkali-developable positive resist material

INVENTOR(S): Takemura, Katsuya; Tsucha, Junji; Ishihara, Toshinobu; Tanaka, Haruyori; Kawai, Yoshio; Nakamura, Jiro

PATENT ASSIGNEE(S): Shinetsu Chemical Industry Co., Ltd., Japan; Nippon Telegraph & Telephone

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08160621	A	19960621	JP 1994-331721	19941209 <--
JP 3198848	B2	20010813		
TW 397936	B	20000711	TW 1995-84112843	19951201 <--
US 5612170	A	19970318	US 1995-569659	19951208 <--
KR 212933	B1	19990802	KR 1995-48056	19951209 <--
PRIORITY APPLN. INFO.:			JP 1994-331720	A 19941209 <--
			JP 1994-331721	A 19941209 <--
			JP 1994-331722	A 19941209 <--

AB The material contains a silicone polymer [Si[C(C6H4OQ)H2]nO3/2]x[Si[C(C6H4OH)H2]mO3/2]m (Q = tert-butoxycarbonyl, tert-butoxycarbonylmethyl, Me3Si, tetrahydropyranyl; n = 1-3; x + m = 1; x ≠ 0), an acid-generating agent, and a N-containing compound The material showed high resolution and sensitivity and good O-plasma etching resistance.

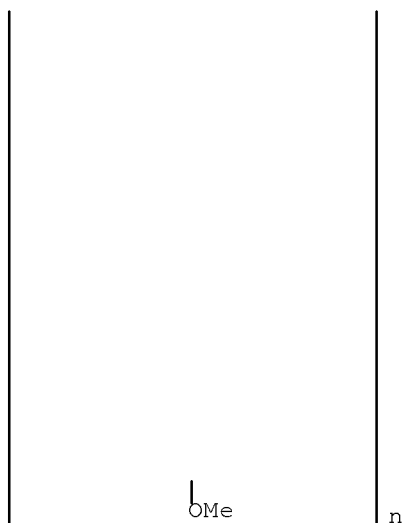
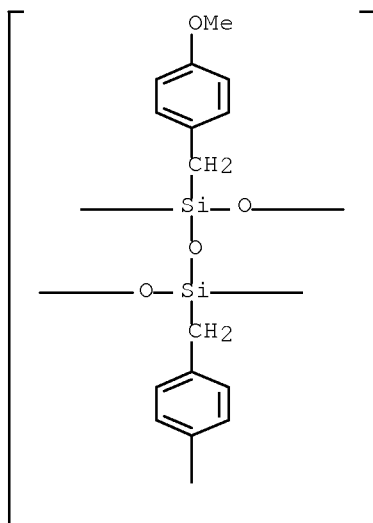
IT 161099-32-7DP, derivs.

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable silicone pos. resist material with high sensitivity and resolution)

RN 161099-32-7 HCAPLUS

CN Poly[[1,3-bis[(4-methoxyphenyl)methyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (CA INDEX NAME)



IC ICM G03F007-039
 ICS G03F007-004; G03F007-029; G03F007-075; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 38
 IT Resists
 (photo-, alkali-developable silicone pos. resist material with high
 sensitivity and resolution)
 IT 75-77-4DP, Trimethylsilyl chloride, reaction products with silsesquioxanes
 5292-43-3DP, tert-Butyl bromoacetate, reaction products with
 silsesquioxanes 24424-99-5DP, Di-tert-butyl dicarbonate, reaction
 products with silsesquioxanes 25512-65-6DP, Dihydropyran, reaction

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products with silsesquioxanes 161055-58-9DP, derivs.
161099-32-7DP, derivs.

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(alkali-developable silicone pos. resist material with high sensitivity and resolution)

OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

L28 ANSWER 31 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:294909 HCAPLUS Full-text

DOCUMENT NUMBER: 125:22307

ORIGINAL REFERENCE NO.: 125:4279a,4282a

TITLE: Positive-working silicone resist materials

INVENTOR(S): Tanaka, Haruyori; Kawai, Yoshio; Nakamura, Jiro; Matsuda, Korehito

PATENT ASSIGNEE(S): Nippon Telegraph & Telephone, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

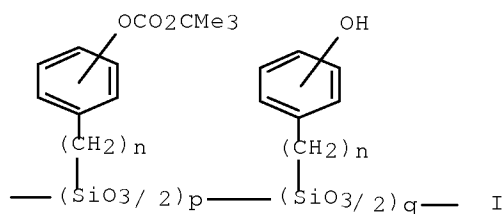
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08029987	A	19960202	JP 1994-187885	19940719 <--
PRIORITY APPLN. INFO.: GI			JP 1994-187885	19940719 <--



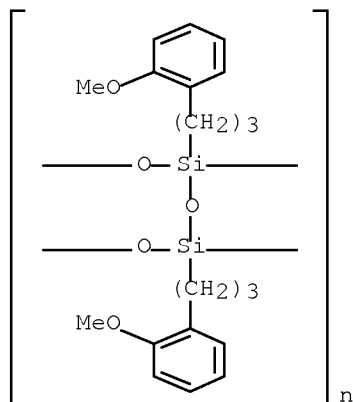
AB The title materials, which are alkali-developable and high energy ray-sensitive, contain a silicone polymer I ($p + q = 1$, $x \neq 0$; $n = 1-3$), an onium salt, and a N-containing compound. The materials show high photosensitivity, high resolution, and good processability, and O plasma etching resistance. Thus, a resist comprised tert-butylcarbonated poly(hydroxybenzylsilsesquioxane), bis(tert-butylphenyl) iodonium trifluoromethanesulfonate, and o-aminobenzoic acid.

IT 158445-31-9DP, hydrolyzed, tert-Bu carbonate ester
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos.-working resist composition containing silsesquioxane and onium salt and nitrogen compound)

RN 158445-31-9 HCAPLUS

CN Poly[[1,3-bis[3-(2-methoxyphenyl)propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



IC ICM G03F007-075
ICS G03F007-075; G03F007-004; G03F007-029; G03F007-26; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT ~~Resists~~
(pos.-working resist composition containing silsesquioxane and onium salt and nitrogen compound)

IT Silsesquioxanes
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working resist composition containing silsesquioxane and onium salt and nitrogen compound)

IT 62-53-3, Aniline, uses 95-54-5, o-Phenylenediamine, uses 99-05-8 106-50-3, p-Phenylenediamine, uses 108-45-2, 1,3-Benzenediamine, uses 118-92-3, o-Aminobenzoic acid 122-39-4, Diphenylamine, uses 150-13-0, p-Aminobenzoic acid 872-50-4, N-Methylpyrrolidone, uses 157089-26-4 157959-61-0, Bis(tert-butylphenyl)iodonium trifluoromethanesulfonate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(pos.-working resist composition containing silsesquioxane and onium salt and nitrogen compound)

IT 158360-73-7DP, hydrolyzed, tert-Bu carbonate ester 158360-74-8DP, hydrolyzed, tert-Bu carbonate ester 158360-76-0DP, hydrolyzed, tert-Bu carbonate ester 158445-31-9DP, hydrolyzed, tert-Bu carbonate ester 158445-32-0DP, hydrolyzed, tert-Bu carbonate ester 158445-33-1DP, hydrolyzed, tert-Bu carbonate ester
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working resist composition containing silsesquioxane and onium salt and nitrogen compound)

IT 104133-11-1, Methylsilanetriol homopolymer 153315-80-1, Methylsilanetriol homopolymer, ladder sru
RL: TEM (Technical or engineered material use); USES (Uses)
(pos.-working resist composition containing silsesquioxane and onium salt and nitrogen compound)

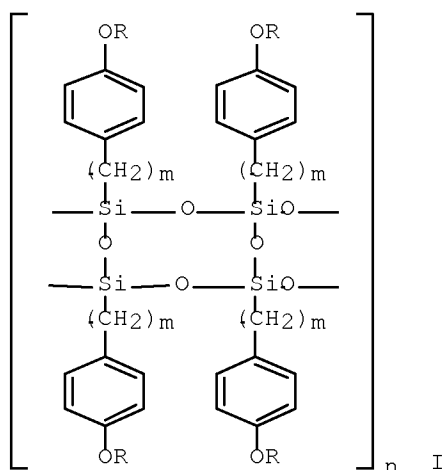
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L28 ANSWER 32 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:367480 HCAPLUS Full-text
DOCUMENT NUMBER: 122:147310

10/593004

ORIGINAL REFERENCE NO.: 122:27079a, 27082a
 TITLE: Acid-sensitive resist and patterning of same
 PATENT ASSIGNEE(S): International Business Machines Corp., USA
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06184311	A	19940705	JP 1993-210073	19930825 <--
JP 2501292	B2	19960529		
US 5338818	A	19940816	US 1992-943086	19920910 <--
PRIORITY APPLN. INFO.: GI			US 1992-943086	A 19920910 <--

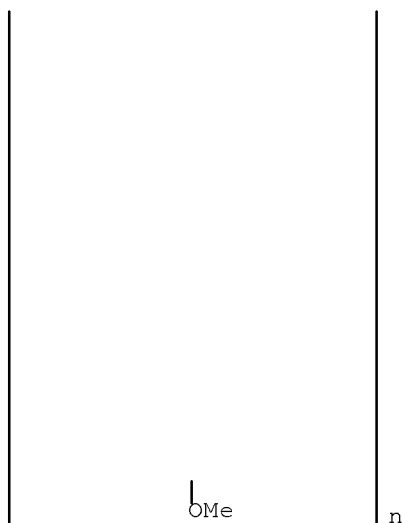
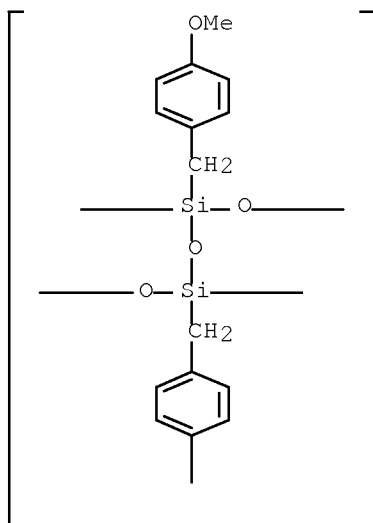


AB The title pos.-working resist contains acid-sensitive arylsilsesquioxanes [I;
 m = 0, 1; n ≥ 3; ≥ 15% of R is tert-butyloxycarbonyl, secondary
 alkyloxycarbonyl, other inactive benzyloxycarbonyl with the remainder H]
 containing protected phenolic OHs in a pendant group capable of yielding
 phenolic OHs upon reaction with acids, the protective group serving as a
 dissoln. inhibitor. The title patterning is effected by coating a substrate
 with the resist composition containing the above polymer, a photo acid
 generator, and anthracene-type sensitizers, baking, patternwise exposing, and
 developing with alkali.

IT 161099-32-7DF, hydrolyzed, esters with di-tert-Bu dicarbonate
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (pos.-working photoresist composition from)

RN 161099-32-7 HCAPLUS

CN Poly[[1,3-bis[(4-methoxyphenyl)methyl]-1,3:1,3-disiloxanediylidene]-1,3-
 bis(oxy)] (CA INDEX NAME)



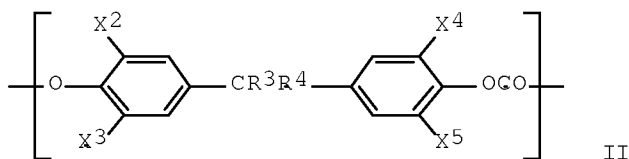
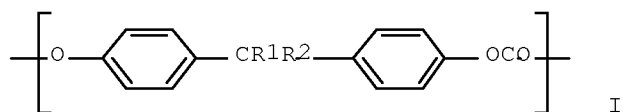
IC ICM C08G077-38
 ICS C08L083-06; G03F007-075
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT Resists
 (photo-, acid-sensitive silsesquioxane)
 IT 161055-58-9P, Trichloro[(4-methoxyphenyl)methyl]silane hydrolytic
 homopolymer 161099-32-7DP, hydrolyzed, esters with di-tert-Bu
 dicarbonate
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (pos.-working photoresist composition from)

OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS
RECORD (10 CITINGS)

L28 ANSWER 33 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1995:312674 HCAPLUS Full-text
 DOCUMENT NUMBER: 122:267184
 ORIGINAL REFERENCE NO.: 122:48769a,48772a
 TITLE: Polycarbonate compositions with excellent flame and
 solvent resistance, fluidity, releasability, and
 mechanical strength
 INVENTOR(S): Okamoto, Masaya; Okumura, Ryoza
 PATENT ASSIGNEE(S): Idemitsu Petrochemical Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 06287433	A	19941011	JP 1993-76712	19930402 <--
PRIORITY APPLN. INFO.:			JP 1993-76712	19930402 <--

GI



AB The compns. contain (a) 1-99% OC₆H(5-m)X₁m (X₁ = halogen; m = 1-5)-terminated polycarbonate-polyorganosiloxane block copolymers containing repeating units I (R₁, R₂ = H, C₁-4 alkyl), II (R₃, R₄ = H, C₁-4 alkyl; X₂-X₅ = halogen), and AR₉(SiR₅R₆O)_kSiR₇R₈R₁₀ACO (R₅-R₈ = H, C₁-6 alkyl, Ph; R₉, R₁₀ = aliphatic or aromatic divalent organic residue; A = O, NH, direct link; k = 1-500) and (b) 1-99% thermoplastic polyesters. Thus, a solution of 40 g 2-hydroxyphenyl-terminated polydimethylsiloxane (III; prepared from octamethylcyclotetrasiloxane, 1,1,3,3-tetramethyldisiloxane, and 2-allylphenol) in 10 L bisphenol A (IV)-COCl₂ copolymer oligomer (d.p. 2-4) CH₂Cl₂ solution (containing 11.6 mol IV) was mixed with a solution of 0.6 mol 3,3',5,5'-tetrabromobisphenol A and 0.51 mol tribromophenol in NaOH aqueous solution, stirred with 2.9 mL Et₃N for 60 min, and then stirred with a solution of 500 g IV in NaOH aqueous solution and CH₂Cl₂ for 60 min to prepare a polymer (III 1.1%, Br 7.9%, viscosity-average mol. weight 20,500), which was dried at 120° overnight. The polymer (70 parts) was dry-blended with 30 parts Dianite MA 523, pelletized, dried, and injection-molded to give a test piece showing tensile strength 630 kg/cm² (JIS K 7113), critical strain 0.51 (1/4

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ellipticity in a 6:4 isooctane-toluene mixture), flame retardance V-0 in the UL-94 vertical burning test, and flow rate 14 + 10-2 mL/s (JIS K 7210).

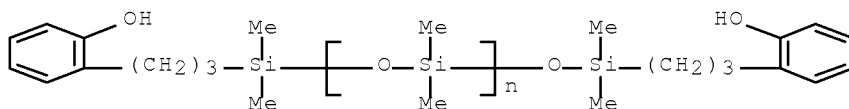
IT 162746-33-0DP, bromophenyl-terminated
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
 (flame- and solvent-resistant polycarbonate comps.
 with good fluidity and mech. strength and mold-release properties)

RN 162746-33-0 HCAPLUS

CN Carbonic dichloride, polymer with α -[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]- ω -[[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 4,4'-(1-methylethylidene)bis[2,6-dibromophenol] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

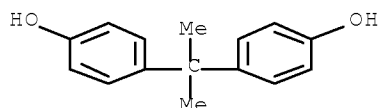
CM 1

CRN 158167-48-7
 CMF (C2 H6 O Si)_n C22 H34 O3 Si2
 CCI PMS



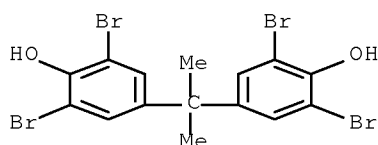
CM 2

CRN 80-05-7
 CMF C15 H16 O2



CM 3

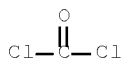
CRN 79-94-7
 CMF C15 H12 Br4 O2



CM 4

CRN 75-44-5

CMF C Cl2 O

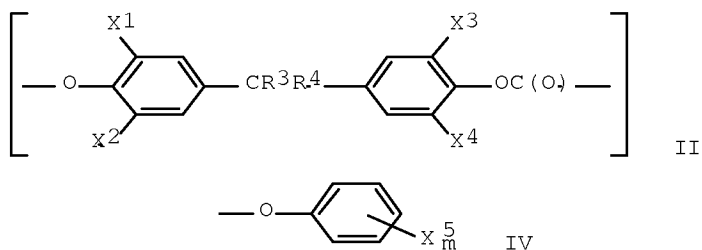


- IC ICM C08L069-00
ICS C08L069-00; C08L067-02; C08L083-10
- CC 37-6 (Plastics Manufacture and Processing)
- ST flame resistance polycarbonate polyorganosiloxane; solvent resistance polycarbonate siloxane compn; mech strength polycarbonate siloxane compn; fluidity polycarbonate siloxane block copolymer; mold release polycarbonate siloxane compn; halophenyl termination polycarbonate siloxane compn; methylsiloxane copolymer PET blend; bromobisphenol copolymer PET blend; bromophenoxy termination block polycarbonate siloxane
- IT Polyesters, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(flame- and solvent-resistant polycarbonate compns. with good fluidity and mech. strength and mold-release properties)
- IT Siloxanes and Silicones, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(polycarbonate-, block, flame- and solvent-resistant polycarbonate compns. with good fluidity and mech. strength and mold-release properties)
- IT Polycarbonates, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(siloxane-, block, flame- and solvent-resistant polycarbonate compns. with good fluidity and mech. strength and mold-release properties)
- IT 98-54-4DP, p-tert-Butylphenol, reaction products with polycarbonate-siloxane block copolymers 25376-38-9DP, Tribromophenol, reaction products with polycarbonate-siloxane block copolymers 159207-76-8DP, bromophenyl-terminated 162746-33-0DP, bromophenyl-terminated
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(flame- and solvent-resistant polycarbonate compns. with good fluidity and mech. strength and mold-release properties)
- IT 24968-12-5, Duranex 2002 25038-59-9, Dianite MA 523, properties 26062-94-2, Butylene glycol-terephthalic acid copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(flame- and solvent-resistant polycarbonate compns. with good fluidity and mech. strength and mold-release properties)
- IT 158167-48-7P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of block polycarbonate-siloxanes)

10/593004

ACCESSION NUMBER: 1995:312672 HCAPLUS Full-text
 DOCUMENT NUMBER: 122:316076
 ORIGINAL REFERENCE NO.: 122:57485a,57488a
 TITLE: Fire-resistant polycarbonate compositions with good mechanical strength, fluidity, and mold-release properties
 INVENTOR(S): Okamoto, Masaya; Okumura, Ryoza
 PATENT ASSIGNEE(S): Idemitsu Petrochemical Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06287430	A	19941011	JP 1993-76717	19930402 <--
PRIORITY APPLN. INFO.: GI			JP 1993-76717	19930402 <--



AB The compns. comprise (A) 1-99% polycarbonate-polyorganosiloxane block copolymers from (a) main chains having repeating units -O-p-C6H4CR1R2-p-C6H4O2C- (I; R1, R2 = H, C1-4 alkyl), II (R3, R4 = H, C1-4 alkyl; X1-X4 = halo), and -AR9(SiR5R6O)kSiR7R8R10ACO- (III; R5-R8 = H, C1-6 alkyl, Ph; R9, R10 = aliphatic or aromatic divalent organic residue; A = O, NH, direct link; k = 1-500) and (b) terminal groups IV (X5 = halo; m = 1-5) and (B) 1-99% elastomers. Thus, 90% polycarbonate-polyorganosiloxane copolymer [prepared from polycarbonate oligomer (from bisphenol A and phosgene; d.p. 2-4) 3170, phenol-terminated polyorganosiloxane (prepared from octamethylcyclotetrasiloxane 1483, 1,1,3,3-tetramethyldisiloxane 96, and 2-allylphenol 60 g; k = 30) 40, tetrabromobisphenol A 330, tribromophenol 169, and bisphenol A 500 g; polyorganosiloxane content 1.1%; Br content 7.9%; viscosity-average mol. weight 20,500] and 10% Paraloid KM 330 (Bu acrylate-Me methacrylate-styrene graft copolymer rubber) were mixed, kneaded at 270°, pelletized, and injection-molded to give a test piece having tensile strength 650 kg/cm², Izod impact strength 61 kg-cm/cm, UL-94 fire-resistance rating V-0 (1/16") and V-2 (1/32"), and fluidity 14 + 10⁻² mL/s.

IT 162746-33-ODP, tribromophenyl-terminated
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
 (fire-resistant polycarbonate blends with good mech. strength, fluidity, and mold-release properties)

RN 162746-33-0 HCAPLUS
 CN Carbonic dichloride, polymer with α -[[3-(2-

10/593004

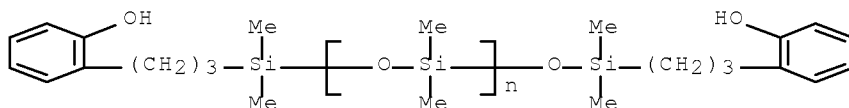
hydroxyphenyl)propyl]dimethylsilyl]-~~o~~-[[[3-(2-
hydroxyphenyl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)],
4,4'-(1-methylethyldiene)bis[2,6-dibromophenol] and
4,4'-(1-methylethyldiene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 158167-48-7

CMF (C2 H6 O Si)_n C22 H34 O3 Si2

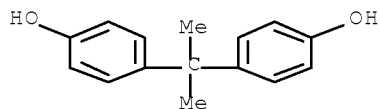
CCI PMS



CM 2

CRN 80-05-7

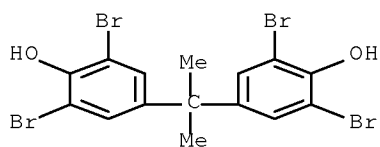
CMF C15 H16 O2



CM 3

CRN 79-94-7

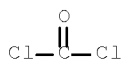
CMF C15 H12 Br4 O2



CM 4

CRN 75-44-5

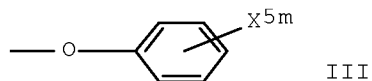
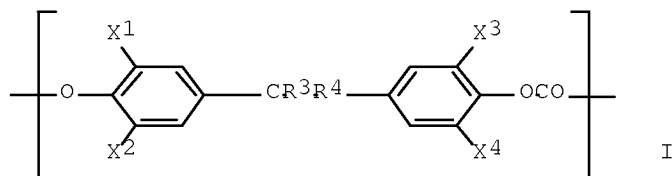
CMF C C12 O



IC ICM C08L069-00
ICS C08L009-00; C08L083-10
ICA C08G064-26
CC 37-6 (Plastics Manufacture and Processing)
IT 98-54-4DP, p-tert-Butylphenol, reaction products with polycarbonate-siloxane block copolymers 25376-38-9DP, Tribromophenol, reaction products with polycarbonate-siloxane block copolymers 159207-76-8DP, tribromophenyl-terminated 162746-33-0DP, tribromophenyl-terminated
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(fire-resistant polycarbonate blends with good mech. strength, fluidity, and mold-release properties)
IT 158167-48-7P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(fire-resistant polycarbonate blends with good mech. strength, fluidity, and mold-release properties)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L28 ANSWER 35 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:312626 HCAPLUS Full-text
DOCUMENT NUMBER: 122:267021
ORIGINAL REFERENCE NO.: 122:48745a, 48748a
TITLE: Fire-resistant polycarbonate compositions containing siloxane-polycarbonate block copolymers
INVENTOR(S): Okamoto, Masaya; Okumura, Ryoza
PATENT ASSIGNEE(S): Idemitsu Petrochemical Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 06279667	A	19941004	JP 1993-66457	19930325 <--
JP 3185903	B2	20010711		
PRIORITY APPLN. INFO.:			JP 1993-66457	19930325 <--
GI				



AB Transparent compns. with high impact resistance and good mold-release properties comprise 0.1-99.9% block polycarbonate-siloxanes including O-p-C6H4CR1R2-p-C6H4O2C units (R1, R2 = H, C1-4 alkyl), I units (R3, R4 = H, C1-4 alkyl; X1-X4 = halo), and AR9(SiR5R6O)kSiR7R8R10ACO (II; R5-R8 = H, C1-6 alkyl, Ph; R9, R10 = divalent organic residue; A = O, NH, direct link; k = 1-100) units, terminated by phenoxy groups III (X5 = halo; m = 1-5) and 0.1-99.9% polycarbonates, in which the content of II is 0.01-10% that of the bisphenol polycarbonate units. Thus, 10 L bisphenol A (IV)-COCl2 oligomer was treated with (a) 40 g [3-(2-hydroxyphenyl)propyl]dimethylsilyl-terminated poly(octamethylcyclotetrasiloxane), (b) 330 g tetrabromobisphenol A (V), and (c) 169 g tribromophenol in the presence of Et3N for 60 min to give a block copolymer, 50% of which was dry-blended with 50% IV-V-COCl2 copolymer, kneaded at 270°, pelletized, dried at 120° for 12 h, and injection-molded to give a test piece showing UL-94 flame retardance V-0, Izod impact resistance 77 kJ/m2 (23°), 74 kJ/m2 (0°), and haze 3%.

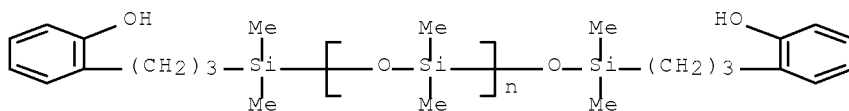
IT 158167-48-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of block polycarbonate-siloxanes)

RN 158167-48-7 HCAPLUS

CN Poly[oxy(dimethylsilylene)], α -[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]- ω -[[[3-(2-hydroxyphenyl)propyl]dimethylsilyl]oxy]- (CA INDEX NAME)



IC ICM C08L069-00

ICS C08G064-10; C08G064-18; C08G081-00; C08L083-10

CC 37-3 (Plastics Manufacture and Processing)

IT 158167-48-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of block polycarbonate-siloxanes)

L28 ANSWER 36 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:689666 HCAPLUS Full-text

DOCUMENT NUMBER: 121:289666

10/593004

ORIGINAL REFERENCE NO.: 121:52719a,52722a
 TITLE: Photoresist composition
 INVENTOR(S): Kobayashi, Yoshihito
 PATENT ASSIGNEE(S): Tokyo Shibaura Electric Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06075377	A	19940318	JP 1992-226130	19920825 <--
PRIORITY APPLN. INFO.:			JP 1992-226130	19920825 <--

AB The title composition comprises an alkali-soluble polymer, a compound having a substituent decomposing by an acid, and a photo acid generator, R2SO3CR1R3C.tplbond.CC.tplbond.CCR4R6O3SR5 [R1-6 = aromatic hydrocarbyl, heterocyclyl, aliphatic hydrocarbyl, characteristic group, H]. The composition showed high sensitivity to both deep UV and ionization radiation and was alkali-developable.

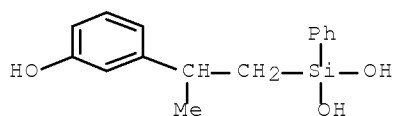
IT 159103-14-7
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (deep UV sensitive alkali-developable photoresist composition)

RN 159103-14-7 HCAPLUS

CN Silanediol, diphenyl-, polymer with
 [2-(3-hydroxyphenyl)propyl]phenylsilanediol (9CI) (CA INDEX NAME)

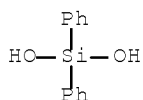
CM 1

CRN 159103-13-6
 CMF C15 H18 O3 Si



CM 2

CRN 947-42-2
 CMF C12 H12 O2 Si



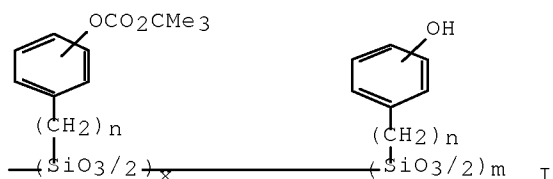
IC ICM G03F007-039

ICS C08K005-42; C08L101-00; G03F007-004; H01L021-312
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 76
 IT Resists
 (photo-, deep UV sensitive photoresist composition)
 IT 24979-70-2, Poly(p-vinylphenol) 159103-11-4 159103-12-5
 159103-14-7 159103-15-8 159103-16-9 159103-20-5
 159103-22-7 159103-24-9
 RL: DEV (Device component use); TEM (Technical or engineered material
 use); USES (Uses)
 (deep UV sensitive alkali-developable photoresist composition)

L28 ANSWER 37 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1994:641833 HCAPLUS Full-text
 DOCUMENT NUMBER: 121:241833
 ORIGINAL REFERENCE NO.: 121:43905a, 43908a
 TITLE: Positive-working resist materials consisting of
 silicone resin and onium salt
 INVENTOR(S): Tanaka, Haruyori; Kawai, Yoshio; Matsuda, Korehito
 PATENT ASSIGNEE(S): Nippon Telegraph & Telephone, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06118651	A	19940428	JP 1992-294009	19921008 <--
PRIORITY APPLN. INFO.:			JP 1992-294009	19921008 <--

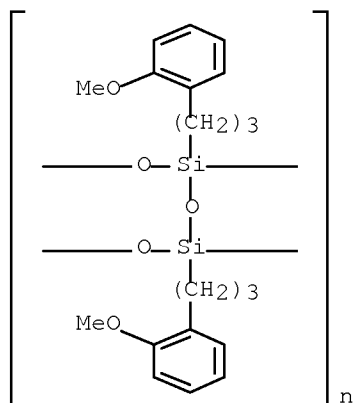
GI



AB The title resist materials can be developed by aqueous base and are sensitive
 to high energy rays, and contain a silicone polymer I ($x + m = 1$; $x \neq 0$; $n =$
 $1-3$) and RpAM [R = (substituted) aromatic group; A = sulfonium, iodonium; M =
 $\text{MeC}_6\text{H}_4\text{SO}_3^-$, CF_3SO_3^- ; $p = 2, 3$]. These resist show good photosensitivity, high
 resolution, and improved processability. Thus, (ethoxybenzyl)trichlorosilane
 was hydrolyzed, polymerized, treated with trimethylsilyl iodide, and then with
 di-tert-Bu dicarbonate to give poly(p-hydroxybenzylsilsesquioxane) tert-Bu
 carbonate (II). A typical resist contains II and (p-MeO C_6H_4)PhI+ p-MeC $\text{C}_6\text{H}_4\text{SO}_3^-$.
 IT 158445-31-9DP, hydrolyzed, tert-Bu carbonate
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of, resists containing oniums and, pos.-working,
 alkali-developable)

10/593004

RN 158445-31-9 HCAPLUS
CN Poly[[1,3-bis[3-(2-methoxyphenyl)propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



IC ICM G03F007-039
ICS G03F007-004; G03F007-029; G03F007-075; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Resists
(pos.-working, alkali-developable, containing silicones and oniums)
IT 158360-73-7DP, hydrolyzed, tert-Bu carbonate 158360-74-8DP, hydrolyzed, tert-Bu carbonate 158360-76-0DP, hydrolyzed, tert-Bu carbonate 158445-31-9DP, hydrolyzed, tert-Bu carbonate 158445-32-0DP, hydrolyzed, tert-Bu carbonate 158445-33-1DP, hydrolyzed, tert-Bu carbonate
RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (preparation of, resists containing oniums and, pos.-working, alkali-developable)
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L28 ANSWER 38 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1993:549495 HCAPLUS Full-text
DOCUMENT NUMBER: 119:149495
ORIGINAL REFERENCE NO.: 119:26551a,26554a
TITLE: Negative-working photoresist composition
INVENTOR(S): Kobayashi, Yoshihito; Niki, Hiroichi; Oonishi, Kyonobu
PATENT ASSIGNEE(S): Toshiba Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 04340550	A	19921126	JP 1991-112079	19910517 <--
PRIORITY APPLN. INFO.:			JP 1991-112079	19910517 <--

10/593004

AB The title photoresist composition contains an alkali-soluble polymer and R2CR1R3C.tplbond.CC.tplbond.CR4R5R6 [R1-6 = H, aromatic hydrocarbon group, heterocyclyl, or carboarom. or carbocyclic group; R1 and R2 or R4 and R5 may form hydrocarbon or heterocyclic ring]. The composition shows high sensitivity to KrF excimer laser and can be used for high-resolution patterning.

IT 119588-34-0

RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing)

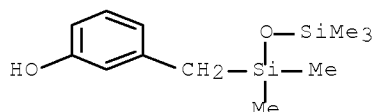
RN 119588-34-0 HCAPLUS

CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 3-[(pentamethyldisiloxanyl)methyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 119588-33-9

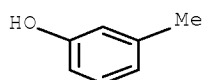
CMF C12 H22 O2 Si2



CM 2

CRN 108-39-4

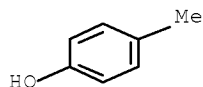
CMF C7 H8 O



CM 3

CRN 106-44-5

CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O

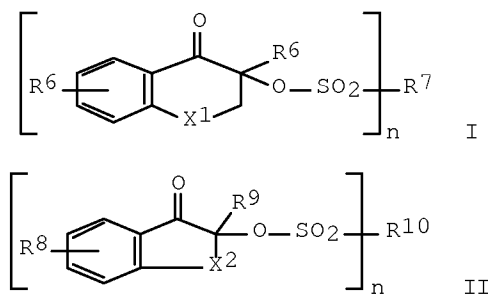
 $\text{H}_2\text{C}=\text{O}$

IC ICM G03F007-025
 ICS G03F007-004; G03F007-023; G03F007-038; G03F007-075; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 IT Resists
 (photo-, neg.-working, high-sensitivity)
 IT 3031-68-3, 2,4-Hexadiyne-1,6-diol 23487-69-6 24979-70-2,
 Poly(p-vinylphenol) 24996-66-5 27029-76-1,
 m-Cresol-p-cresol-formaldehyde copolymer 32527-15-4
~~119588-34-0~~ 120551-36-2 135831-10-6 149873-02-9
 149873-03-0 149873-04-1 149873-05-2 149873-06-3 149873-07-4
 149873-08-5 149873-09-6 149873-10-9 149873-11-0 149873-12-1
 149873-13-2 149972-27-0 149972-28-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (photoresist composition containing)

L28 ANSWER 39 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1992:601937 HCAPLUS Full-text
 DOCUMENT NUMBER: 117:201937
 ORIGINAL REFERENCE NO.: 117:34681a,34684a
 TITLE: photosensitive composition for high resolution
 lithography
 INVENTOR(S): Kobayashi, Yoshihito; Niki, Hiroichi; Onishi, Kiyonobu
 PATENT ASSIGNEE(S): Toshiba Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 03289659	A	19911219	JP 1990-285776	19901025 <--
PRIORITY APPLN. INFO.:			JP 1990-76601	A1 19900328 <--

GI



AB The title photosensitive composition comprises an alkali soluble polymer, an organic dissoln. suppressing agent containing a substituent decomposable by an acid, and a photoacid generator selected from $[R1C(O)CR2R3OSO2]_nR4$, I, II, and $[R11C(O)CR12R13CR14HOSO]_nR4$ $[R1-3, R5,6, R8,9, R11-14 = H, \text{halo}, CN, \text{silyl}, \text{monovalent organic group}; R4, R7, R10, R15 = \text{organic group}; n = 1-7; X1,2 = O, S, CO, SO2, CR1R2, NCOR3]$.

IT 119588-34-0

RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing)

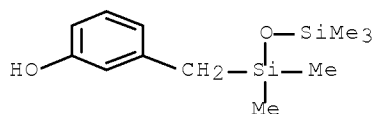
RN 119588-34-0 HCAPLUS

CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 3-[(pentamethyldisiloxanyl)methyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 119588-33-9

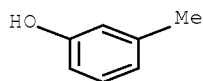
CMF C12 H22 O2 Si2



CM 2

CRN 108-39-4

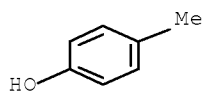
CMF C7 H8 O



CM 3

CRN 106-44-5

CMF C7 H8 O



CM 4

CRN 50-00-0
CMF C H2 O

H₂C=O

IC ICM G03F007-075
ICS G03F007-004; G03F007-039; H01L021-027
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT Resists
(photo-, composition, for high resolution patterning)
IT 4298-69-5 9010-92-8 19255-01-7 24979-70-2, Poly(p-vinylphenol)
25053-88-7, p-Cresol-formaldehyde copolymer 25085-34-1 25086-36-6,
m-Cresol-formaldehyde copolymer 41996-76-3 51256-40-7 82540-07-6
87456-51-7 87456-53-9 87456-54-0 87456-61-9 102868-49-5
119588-34-0 143897-22-7 143897-23-8 143897-24-9
143897-25-0 143897-26-1 143897-27-2 143897-28-3 143897-29-4
143897-30-7 143897-31-8 143897-32-9 143897-33-0 143897-34-1
143897-35-2 143897-36-3 143897-37-4 143897-38-5 143897-39-6
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143897-45-4 143897-46-5 143897-47-6 143897-48-7 143897-49-8
143897-50-1 143897-51-2 143897-52-3 143897-53-4 143897-54-5
143908-37-6 143987-45-5 144025-37-6
RL: TEM (Technical or engineered material use); USES (Uses)
(photoresist composition containing)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)

L28 ANSWER 40 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1992:560638 HCAPLUS Full-text
DOCUMENT NUMBER: 117:160638
ORIGINAL REFERENCE NO.: 117:27589a,27592a
TITLE: A novel silicon-containing resist for half-micron
photolithography
AUTHOR(S): Noguchi, Tsutomu; Nito, Keiichi; Tomita, Hidemi; Seto,
Junetsu
CORPORATE SOURCE: Res. Cent., Sony Corp., Yokohama, 240, Japan
SOURCE: Polym. Microelectron. Proc. Int. Symp. (1990
, Meeting Date 1989, 305-16. Editor(s): Tabata, Yoneho. Kodansha:
Tokyo, Japan.
CODEN: 57NMAB
DOCUMENT TYPE: Conference
LANGUAGE: English

AB A new pos. working photoresist which is applicable to the bi-layer resist
system using a current optical reduction stepper was developed. This resist
consists of a naphthoquinone diazide photoactive compound and a silicon
containing novolak resin prepared by condensation of phenols with siloxane
groups (-Si-O-) with formaldehyde. The Si-containing resist has a resolution
capability of 0.5 µm L/S with a g-line sensitivity .apprx.250 mJ/cm², and a
high resistance to an O₂ plasma, with an etching rate ratio of 61:1
(photoresist/Si resist). 0.5 µm L/S pattern was precisely transferred to the
bottom layer by O₂ RIE with vertical side walls. The two-dimensional
development process simulation program SAMPLE was improved to carry out more
precise profile simulation. A modified string model which takes into account

the shape of the resist profile during development is proposed. The 0.5 μm L/S pattern profiles were simulated well with our modified model.

IT 117476-22-9P

RL: PREP (Preparation)

(lithog. pos.-working photoresist containing naphthoquinone diazide photoactive compound and, preparation and characterization of)

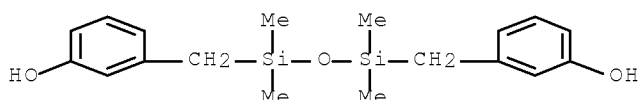
RN 117476-22-9 HCAPLUS

CN Formaldehyde, polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(methylene)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 117476-21-8

CMF C18 H26 O3 Si2



CM 2

CRN 50-00-0

CMF C H2 O

H₂C=O

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Resists

(photo-, pos.-working, containing naphthoquinone diazide photoactive compound

and silicon-containing novolak resin)

IT 117476-22-9P

RL: PREP (Preparation)

(lithog. pos.-working photoresist containing naphthoquinone diazide photoactive compound and, preparation and characterization of)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L28 ANSWER 41 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1992:521564 HCAPLUS Full-text

DOCUMENT NUMBER: 117:121564

ORIGINAL REFERENCE NO.: 117:20956h, 20957a

TITLE: Photosensitive composition containing phenol polymer and 5-membered ring heterocyclic compound

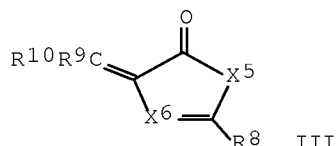
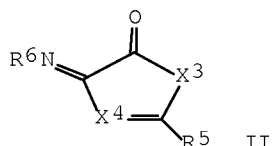
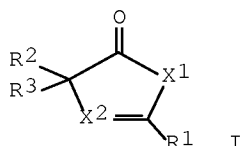
INVENTOR(S): Kobayashi, Yoshikimi; Onishi, Kiyonobu; Niki, Hiroichi; Kawamonzon, Yoshihiro

PATENT ASSIGNEE(S): Toshiba Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03208056	A	19910911	JP 1990-2543	19900111 <--
PRIORITY APPLN. INFO.: GI			JP 1990-2543	19900111 <--



AB A photosensitive composition contains a phenol-type alkali-soluble polymer, a 5-membered ring heterocyclic compound [I, II, or III; X1, X3, X5 = O, S; X2 = N, CR4; X4 = N, CR7; X6 = N, CR11; R1-R11 = H, (un)substituted heterocycllyl or aromatic or aliphatic hydrocarbyl, other functional group; or R2R3 or R9R10 may form a carbo- or heterocyclic ring], and a compound generating an acid upon light irradiation. Preferably at least one of the substituents R1-R3 in I, R5 and R6 in II, or R8-R10 in III is a Si-containing functional group and a phenol-type Si-containing alkali-soluble polymer is used. The photosensitive composition can be exposed by a short wavelength radiation such as deep UV, shows excellent resistance against dry etching and O-reactive ion etching, has large tolerance in exposure and development by an aqueous alkali solution, can form detailed patterns having good cross-sectional shapes, and is suitable for alkali-developable single- or double-layer lithog. process. The acid released by the deep UV irradiation of the photosensitive composition decomp. I-III, increases the alkali solubility of the composition, and allows the exposed parts to dissolve by alkali development to give pos. patterns. Neg. patterns are also formed by exposure, heat treatment, and alkali development. Using the pos. patterns as the masks against polymer underlayers, dry etching gives double-layer patterns with good aspect ratios and cross-sectional shapes. Typically it gives neg.- or pos.-working patterns having line width or line-to-line distance of 0.3μm.

IT 119588-34-0

RL: USES (Uses)

(alkali-developable photosensitive composition containing, for patterning)

RN 119588-34-0 HCAPLUS

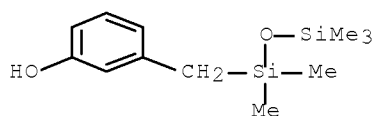
CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 3-[(pentamethyldisiloxanyl)methyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 119588-33-9

CMF C12 H22 O2 Si2

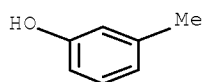
10/593004



CM 2

CRN 108-39-4

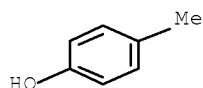
CMF C7 H8 O



CM 3

CRN 106-44-5

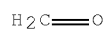
CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O



IC ICM G03F007-038

ICS G03F007-031; G03F007-075; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Resists

(photo-, UV, deep, laser-sensitive, containing phenol resins, pyranone or azolone derivs., and acid-releasing compds.)

IT 24979-70-2, Poly(p-vinylphenol) 119588-34-0

RL: USES (Uses)

(alkali-developable photosensitive composition containing, for patterning)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD

(1 CITINGS)

L28 ANSWER 42 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1992:215654 HCAPLUS Full-text

DOCUMENT NUMBER: 116:215654

ORIGINAL REFERENCE NO.: 116:36557a,36560a

TITLE: Heat- and moisture-resistant thermosetting resin compositions

INVENTOR(S): Miyagawa, Hiroyuki; Ora, Akio; Hirose, Shoichi

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

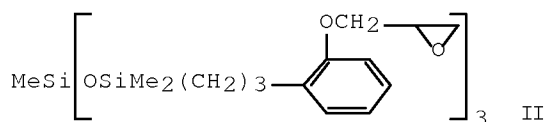
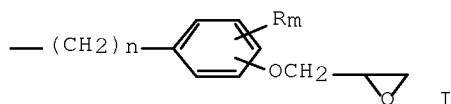
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03275712	A	19911206	JP 1990-77636	19900326 <--
PRIORITY APPLN. INFO.:			JP 1990-77636	19900326 <--

GI



AB The title compns. with good epoxy resin compatibility, giving flexible elec. insulating products useful for adhesives and sealants, comprise organic Si compds. containing ≥ 3 Si-bonded units I ($R = C1-20$ alkyl, alkoxy, substituted alkyl; $n = 2, 3$; $m = 0-4$) and compds. containing ≥ 2 epoxy-reactive functional groups and/or epoxy ring-opening polymerization initiators. Thus, addition reaction of o-allylphenyl glycidyl ether and TSL 8242 [$MeSi(OSiHMe_2)_3$] gave 94% silane II, 33 parts of which was blended with EOCN 1020 (epoxy resin) 100, H 1 (phenol novolak) 62, PPh_3 1.33, and γ -glycidoxypropyltrimethoxysilane 1.33 part, then melt kneaded and cured in a mold at $120-150^\circ$ to give a test piece with glass transition point 164° and moisture absorptivity after 100-h pressure-cooker test 2.30%, vs. 152 and 2.73, resp., for a control using γ -glycidoxypropyl-terminated di-Me siloxane instead of II.

IT 141105-63-7P

RL: PREP (Preparation)

(preparation of, elec. insulating, heat- and moisture-resistant, with good flexibility)

RN 141105-63-7 HCAPLUS

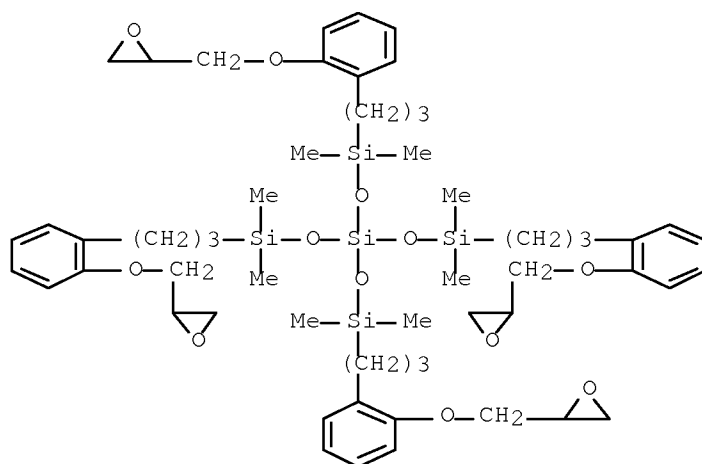
CN Formaldehyde, polymer with EOCN 1020, phenol and 3,3-bis[[dimethyl[3-[2-(oxiranylmethoxy)phenyl]propyl]silyl]oxy]-1,1,5,5-tetramethyl-1,5-bis[3-[2-(oxiranylmethoxy)phenyl]propyl]trisiloxane (9CI) (CA INDEX NAME)

10/593004

CM 1

CRN 141102-04-7

CMF C56 H84 O12 Si5



CM 2

CRN 104841-49-8

CMF Unspecified

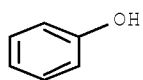
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 108-95-2

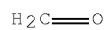
CMF C6 H6 O



CM 4

CRN 50-00-0

CMF C H2 O



IC ICM C08G059-32
 CC 37-6 (Plastics Manufacture and Processing)
 IT ~~141105-63-7P~~ 141105-64-8P ~~141123-90-2P~~
 RL: PREP (Preparation)
 (preparation of, elec. insulating, heat- and moisture-resistant, with good flexibility)

L28 ANSWER 43 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1991:618890 HCAPLUS Full-text
 DOCUMENT NUMBER: 115:218890
 ORIGINAL REFERENCE NO.: 115:37169a,37172a
 TITLE: Resist material containing siloxane novolak resin with oxygen-plasma resistance
 INVENTOR(S): Noguchi, Tsutomu; Tomita, Hidemi
 PATENT ASSIGNEE(S): Sony Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 03056964	A	19910312	JP 1989-193474	19890726 <--
PRIORITY APPLN. INFO.:			JP 1989-193474	19890726 <--

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The material contains siloxane polymer having unit I and/or II [R1, R9 = lower alkylene; R2-4, R10-12 = H, OH, Me, CH2OH; R5-8 = lower alkyl; R13 = CH2, CH2OCH2; A = phenol (having 1-3 substituted groups), Q1; R14 lower alkylene; R15-17 = lower alkyl; $0 < x \leq 1$; $y = 0, 1-x$] bonded with diazo compound The material is used in manufacture of semiconductor integrated circuits and magnetic bubble memory devices, etc. A material containing III-m-chlorocresol-p-cresol-formalin copolymer esterified with naphthoquinonediazide-4-sulfonylchloride showed high resolution and O-plasma dry-etching resistance.

IT ~~136882-80-9~~
 RL: USES (Uses)
 (resist containing, for high resolution and dry-etching resistance)

RN 136882-80-9 HCAPLUS

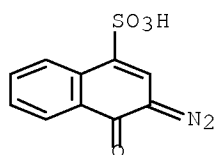
CN Formaldehyde, polymer with chloro-3-methylphenol, 4-methylphenol and 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(methylene)]bis[phenol], 3-diazo-3,4-dihydro-4-oxo-1-naphthalenesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 20680-48-2

CMF C10 H6 N2 O4 S

10/593004



CM 2

CRN 189145-74-2

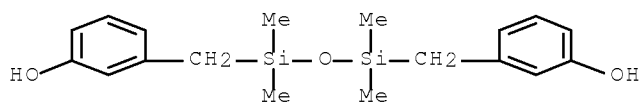
CMF (C18 H26 O3 Si2 . C7 H8 O . C7 H7 Cl O . C H2 O)x

CCI PMS

CM 3

CRN 117476-21-8

CMF C18 H26 O3 Si2

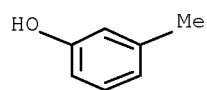


CM 4

CRN 66749-51-7

CMF C7 H7 Cl O

CCI IDS

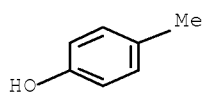


D1-C1

CM 5

CRN 106-44-5

CMF C7 H8 O



CM 6

CRN 50-00-0

CMF C H2 O

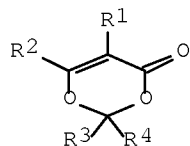
H₂C=O

IC ICM G03F007-075
 ICS G03F007-016; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)
 Section cross-reference(s): 76
 IT ~~Resists~~
 (photo-, dry etching-resistant, from siloxane group-containing novolak
 resin)
 IT ~~136882-80-9~~
 RL: USES (Uses)
 (resist containing, for high resolution and dry-etching resistance)

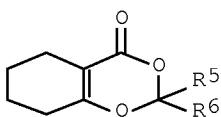
L28 ANSWER 44 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1991:418620 HCAPLUS Full-text
 DOCUMENT NUMBER: 115:18620
 ORIGINAL REFERENCE NO.: 115:3197a,3200a
 TITLE: Photosensitive composition and pattern formation
 method using it
 INVENTOR(S): Onishi, Yasunobu; Niki, Hirokazu; Kobayashi,
 Yoshihito; Hayase, Rumiko; Ushirogouchi, Toru
 PATENT ASSIGNEE(S): Toshiba Corp., Japan
 SOURCE: Eur. Pat. Appl., 101 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 396254	A2	19901107	EP 1990-303556	19900403 <--
EP 396254	A3	19911113		
EP 396254	B1	19960710		
R: DE, FR, GB				
JP 02262151	A	19901024	JP 1989-81453	19890403 <--
JP 03011352	A	19910118	JP 1989-146503	19890608 <--
JP 03017652	A	19910125	JP 1989-150444	19890615 <--
JP 03017653	A	19910125	JP 1989-150445	19890615 <--
US 5091282	A	19920225	US 1990-504300	19900403 <--
PRIORITY APPLN. INFO.:			JP 1989-81453	A 19890403 <--
			JP 1989-146503	A 19890608 <--
			JP 1989-150444	A 19890615 <--
			JP 1989-150445	A 19890615 <--

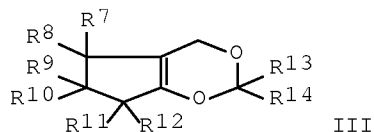
OTHER SOURCE(S): MARPAT 115:18620
 GI



I



II



III

AB A photosensitive composition is described containing resin with a phenol skeleton and a compound from I, II, or III [R1, R2 = H, alkyl; R3, R4 = R1, aryl, furyl, pyridyl, 2-styrene, together may form a cyclic structure; R5, R6 = R3, R4; R7-R12 = R1; R13, R14 = R3, R4]. The phenol-containing polymer may contain Si. The composition may contain a basic compound A method of producing a pattern for semiconductor devices is also described. The composition can produce fine patterns.

IT 119588-34-0

RL: USES (Uses)

(photosensitive composition containing, for fine pattern formation)

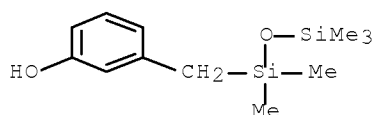
RN 119588-34-0 HCAPLUS

CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 3-[(pentamethyldisiloxanyl)methyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 119588-33-9

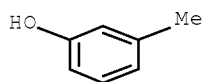
CMF C12 H22 O2 Si2



CM 2

CRN 108-39-4

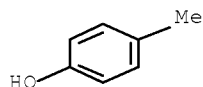
CMF C7 H8 O



CM 3

CRN 106-44-5

CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM G03F007-031
ICS G03F007-029

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 76

ST photosensitive compn patterning semiconductor; phenol resin silicon
photosensitive compn; resist dioxinone compn
photosensitive compn

IT Resists
(photo-, composition containing resin with phenolic skeleton and
dioxinone compound for)

IT 95-16-9, Benzothiazole 95-21-6 102-82-9 110-86-1, Pyridine, uses and
miscellaneous 120-75-2 288-32-4, 1H-Imidazole, uses and miscellaneous
615-15-6 1678-43-9 2799-82-8 2799-83-9 9016-83-5 24979-70-2
28637-54-9 32935-31-2 32935-37-8 32961-64-1 32961-66-3
34435-87-5 35563-21-4 35563-23-6 66003-76-7 66003-78-9
84563-54-2 87769-39-9 ~~119588-34-0~~ 127746-76-3
127746-77-4 134521-92-9 134521-93-0 134521-94-1 134521-95-2
134521-96-3 134521-97-4 134521-98-5 134521-99-6 134522-00-2
134522-01-3 134522-02-4 134522-03-5 134522-04-6 134522-05-7
134522-06-8 134563-67-0
RL: USES (Uses)
(photosensitive composition containing, for fine pattern formation)

L28 ANSWER 45 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:498225 HCAPLUS Full-text

DOCUMENT NUMBER: 113:98225

ORIGINAL REFERENCE NO.: 113:16609a,16612a

TITLE: Silicone-epoxy compounds for heat- and moisture-
resistant cured compositions

INVENTOR(S): Ora, Akio; Hirose, Shoichi; Watanabe, Tetsuya

PATENT ASSIGNEE(S): Toray Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

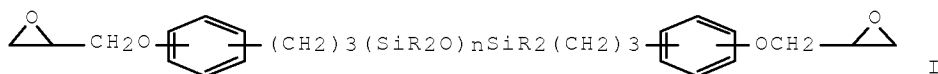
DATE

APPLICATION NO.

DATE

10/593004

JP 02069528	A	19900308	JP 1988-221556	19880902 <--
PRIORITY APPLN. INFO.:			JP 1988-221556	19880902 <--
GI				



AB Title epoxy-siloxane I (R = C1-4 alkyl, alkenyl, Ph; n = 2-1000) having good compatibility with crosslinking agents are prepared Thus, 70 g o-allylphenyl glycidyl ether and 52 g 1,1,3,3,5,5,7,7-octamethyltetrasiloxane were treated in the presence of H₂PtCl₆ at 48-52° to give title epoxy-siloxane (II). A composition of II 83.8, 4,4'-diaminodiphenyl sulfone 11.2, and salicylic acid 5 parts was mixed at 150°, defoamed, and cast-molded at 180° for 5 h to give a test piece having water absorption 1.7% after pressure cooker test and 3.5% weight reduction at 30-300°, vs. 10.3 and 7.9, resp., for the test piece using Denacol EX 212 instead of II.

IT 128761-49-9P

RL: PREP (Preparation)

(preparation of, heat and moisture resistant, with flexibility)

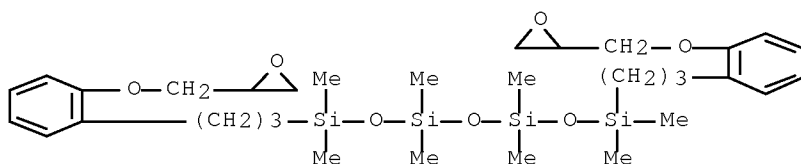
RN 128761-49-9 HCAPLUS

CN Benzenamine, 4,4'-sulfonylbis-, polymer with 1,1,3,3,5,5,7,7-octamethyl-1,7-bis[3-[2-(oxiran-2-ylmethoxy)phenyl]propyl]tetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 128761-48-8

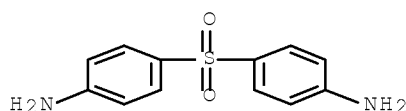
CMF C32 H54 O7 Si4



CM 2

CRN 80-08-0

CMF C12 H12 N2 O2 S



IC ICM C08G077-14
ICS C08G059-22
CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38
IT 128761-48-8P
RL: PREP (Preparation)
(preparation of, for heat- and moisture-resistant cured
compos.)
IT 128761-49-9P 128761-50-2P 128761-51-3P
128761-52-4P
RL: PREP (Preparation)
(preparation of, heat and moisture resistant, with flexibility)

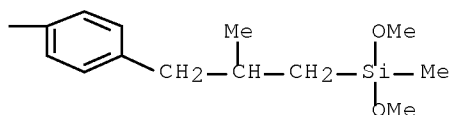
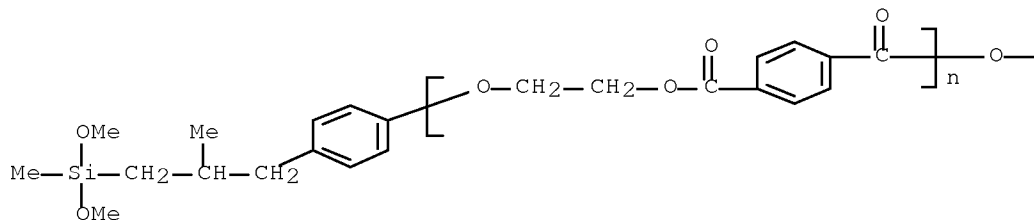
L28 ANSWER 46 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1990:442552 HCAPLUS Full-text
DOCUMENT NUMBER: 113:42552
ORIGINAL REFERENCE NO.: 113:7237a,7240a
TITLE: Flexible solvent-resistant coating
compositions
INVENTOR(S): Ono, Ichiro; Yoshioka, Hiroshi; Mizuno, Takashi;
Yamakado, Nagahiko
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan; Natoco
Paint Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01141964	A	19890602	JP 1987-299490	19871127 <--
PRIORITY APPLN. INFO.:			JP 1987-299490	19871127 <--

AB Compos. giving coatings with excellent adhesion and weatherability comprise synthetic resins and modifiers containing A[SiR_{13-n}(OR₂)_n]₂ (A = organic group containing ester or ether bond; R₁, R₂ = C₁-4 alkyl; n = 1-3). Thus, 300 g CH₂:CHCH₂(OC_{2.5}H₅)₄OOCH₂CH:CH₂ was treated with 37.8 g HSi(OMe)₃ in toluene in the presence of chloroplatinic acid to give 328.3 g (MeO)₃Si(CH₂)₃(OC_{2.5}H₅)₄OO(CH₂)₃Si(OMe)₃ (I). A composition containing 100 parts Natoco Ceran White (acrylic-silicone coating) and 15 parts I was applied on a glass plate, a dull-finished steel plate, and an alkyd-melamine plate and dried 7 days at 20° and 65% relative humidity to form coatings with cross-cut adhesion 100/100, 100/100, and 100/100, resp., vs. 80/100, 50/100, and 50/100, resp., without I.

IT 125350-43-8P, preparation
RL: PREP (Preparation)
(preparation of, synthetic resin coatings containing, with improved adhesion and weatherability and flexibility)

RN 125350-43-8 HCAPLUS
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl),
α-[4-[3-(dimethoxymethylsilyl)-2-methylpropyl]phenyl]-ω-[4-[3-(dimethoxymethylsilyl)-2-methylpropyl]phenoxy]- (9CI) (CA INDEX NAME)



IC ICM C09D007-12
 CC 42-10 (Coatings, Inks, and Related Products)
 IT 70776-52-2P 96591-81-0P 125337-97-5P 125337-98-6P 125337-99-7P
 125338-00-3P 125350-42-7P ~~125350-43-8P~~, preparation
 125350-44-9P 125362-40-5P 125371-38-2P 125548-51-8P
 RL: PREP (Preparation)
 (preparation of, synthetic resin coatings containing, with improved
 adhesion and
 weatherability and flexibility)

L28 ANSWER 47 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:432009 HCAPLUS Full-text

DOCUMENT NUMBER: 113:32009

ORIGINAL REFERENCE NO.: 113:5351a,5354a

TITLE: Silicon-containing ultraviolet resists

PATENT ASSIGNEE(S): Toshiba Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

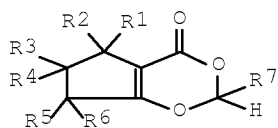
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

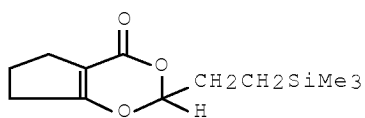
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 02003055	A	19900108	JP 1988-151777	19880620 <--
PRIORITY APPLN. INFO.:			JP 1988-151777	19880620 <--
OTHER SOURCE(S):	MARPAT	113:32009		

GI



I



II

AB UV resists contain alkali-soluble phenolic polymers and Si-containing compds. I (R1-6 = H, C1-10-(substituted) alkyl; R7 = Si-containing organic group). These resists are resistant to reactive ion etching, developable with alkaline aqueous solns., and may be used in bilevel resists. Thus, a solution of 70 g diphenylpolysiloxane and 30 g II in Et cellosolve acetate was coated on novolak resist layer on Si wafer, dried, prebaked, and patternwise exposed with KrF excimer laser beam. Resist developed with aqueous Me4NOH was etched with reactive ion using O2, to obtain pattern with 2.3- μ m thickness and 0.3- μ m line-and space.

IT 119588-34-0

RL: USES (Uses)

(photoresists containing organic silicon compds. and, for etching-resistance)

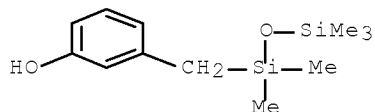
RN 119588-34-0 HCAPLUS

CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 3-[(pentamethyldisiloxanyl)methyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 119588-33-9

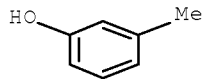
CMF C12 H22 O2 Si2



CM 2

CRN 108-39-4

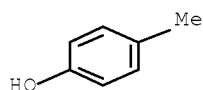
CMF C7 H8 O



CM 3

CRN 106-44-5

CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O

H₂C=O

IC ICM H01L021-30

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Resists

(photo-, deep-UV, silicon-containing, etching-resistant)

IT 24979-70-2, Poly(p-vinylphenol) 119588-34-0

RL: USES (Uses)

(photoresists containing organic silicon compds. and, for etching-resistance)

L28 ANSWER 48 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:243087 HCAPLUS Full-text

DOCUMENT NUMBER: 112:243087

ORIGINAL REFERENCE NO.: 112:40855a, 40858a

TITLE: Negative-working photoresist composition

INVENTOR(S): Noguchi, Tsutomu; Miyashita, Mayumi

PATENT ASSIGNEE(S): Sony Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

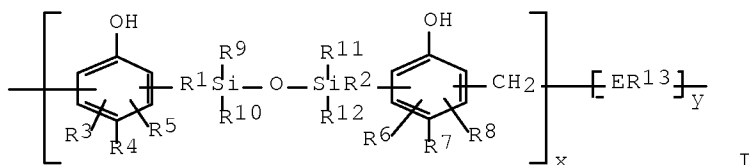
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01206330	A	19890818	JP 1988-32142	19880215 <--
PRIORITY APPLN. INFO.:			JP 1988-32142	19880215 <--

GI



AB The title photoresist composition contains a Si polymer (weight-average mol. weight 3000-30,000) containing I [R1, R2 = alkylene; R3-8 = H, OH, Me, CH2OH; R9-12 = lower alkyl; R13 = CH2, CH2OCH2; E = phenol, 1-3-substituted phenol] and an aromatic azido compound sensitive to ≤ 300 nm. The photoresist composition shows good resistance to plasma etching.

IT 117476-22-9

RL: USES (Uses)

(neg.-working photoresist containing)

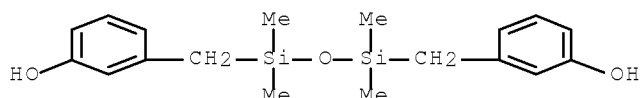
RN 117476-22-9 HCAPLUS

CN Formaldehyde, polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(methylene)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 117476-21-8

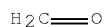
CMF C18 H26 O3 Si2



CM 2

CRN 50-00-0

CMF C H2 O



IC ICM G03C001-71

ICS G03C001-71

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT Resists

(photo-, neg., containing silicon-containing phenolic resins)

IT 7300-27-8 117476-22-9

RL: USES (Uses)

(neg.-working photoresist containing)

L28 ANSWER 49 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1990:45711 HCAPLUS Full-text

DOCUMENT NUMBER: 112:45711

ORIGINAL REFERENCE NO.: 112:7715a, 7718a

TITLE: Silicon-containing ultraviolet photoresists

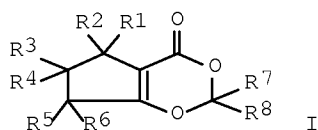
INVENTOR(S): Oonishi, Kyonobu; Hayase, Shuji; Horiguchi, Rumiko; Gokochi, Tooru

PATENT ASSIGNEE(S): Toshiba Corp., Japan

10/593004

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01159638	A	19890622	JP 1987-317857	19871216 <--
PRIORITY APPLN. INFO.: GI			JP 1987-317857	19871216 <--



AB Alkali-soluble Si-containing polymers with phenolic groups and compds. I (R1-6 = H, C1-10 alkyl; R7-8 = H, C1-10 alkyl, aryl, furyl, pyridyl, 2-styryl) are contained in UV photoresists. The photoresists are developable with alkaline aqueous solns., produce patterns resistant to reactive ion etching, and can be used in bilevel resists to produce fine patterns. Thus, a solution containing 70 g phenyl(m-hydroxyphenyl)siloxane and 30 g I (R1-7 = H; R8 = 2-furyl) in Et Cellosolve acetate was applied on a 2-μm-thick layer of a novolak photoresist on a Si wafer and dried to form a 0.6-μm-thick layer. Patternwise exposure to a KrF excimer laser beam (200 mJ/cm²) and development in 1% Me₄NOH gave a resist pattern. Reactive ion etching with O produced a pattern with a 0.3-μm line and space and a 2.3-μm height, with a sharp rectangular profile.

IT 119588-34-0

RL: USES (Uses)

(deep-UV photoresists containing photosensitive agents and)

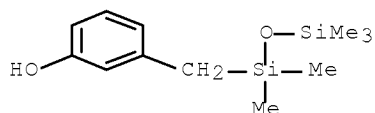
RN 119588-34-0 HCAPLUS

CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 3-[(pentamethyldisiloxanyl)methyl]phenol (9CI) (CA INDEX NAME)

CM 1

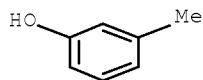
CRN 119588-33-9

CMF C12 H22 O2 Si2



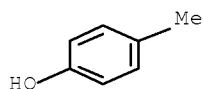
CM 2

CRN 108-39-4
CMF C7 H8 O



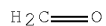
CM 3

CRN 106-44-5
CMF C7 H8 O



CM 4

CRN 50-00-0
CMF C H2 O



IC ICM G03C001-71
ICS G03C001-00; G03C005-16; H01L021-30
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
IT Resists
(photo-, deep-UV, containing silicon-containing phenolic resins)
IT 119588-34-0
RL: USES (Uses)
(deep-UV photoresists containing photosensitive agents and)

L28 ANSWER 50 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:622152 HCAPLUS Full-text
DOCUMENT NUMBER: 111:222152
ORIGINAL REFERENCE NO.: 111:36733a, 36736a
TITLE: Photosensitive composition containing azide compound
for high-precision pattern
INVENTOR(S): Horiguchi, Rumiko; Hayase, Shuzi; Onishi, Yasunobu;
Ushirogouchi, Toru
PATENT ASSIGNEE(S): Toshiba Corp., Japan
SOURCE: Ger. Offen., 36 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3841571	A1	19890629	DE 1988-3841571	19881209 <--
JP 01154047	A	19890616	JP 1987-312657	19871210 <--
JP 01154048	A	19890616	JP 1987-312658	19871210 <--
JP 01161336	A	19890626	JP 1987-320414	19871218 <--
JP 01241544	A	19890926	JP 1988-68387	19880323 <--
DE 3844739	C2	19950907	DE 1988-3844739	19881209 <--
PRIORITY APPLN. INFO.:			JP 1987-312657	A 19871210 <--
			JP 1987-312658	A 19871210 <--
			JP 1987-320414	A 19871218 <--
			JP 1988-68387	A 19880323 <--
			DE 1988-3841571	A3 19881209 <--

AB A photosensitive composition is described containing an alkali-soluble resin, optionally a Si-containing resin, and a compound sensitive to 248 nm deep UV radiation and having the formula $R_1COC(N_2)COR_2$ [I; $R_1, R_2 = C_1-20$ alkyl or alkoxy, aryl, aryloxy, anilino]. Optionally the photosensitive compds. are Si-containing compds. of the formula $R_2R_3R_4 SiC(N_2)R_1$ [$R_1-R_4 = H, C_1-10$ alkyl, aryl, silyl]. The preferred compds. of the formula I are aromatic compds. in which ≥ 1 benzene ring is substituted with ≥ 1 $O_2CC(N_2)COMe$ group.

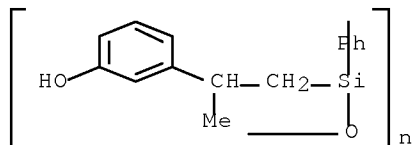
IT 123710-88-3

RL: USES (Uses)

(binder, for deep UV photoresist)

RN 123710-88-3 HCAPLUS

CN Poly[oxy[[2-(3-hydroxyphenyl)propyl]phenylsilylene]] (9CI) (CA INDEX NAME)



IC ICM G03F007-10

ICS G03F007-08; C08L025-18; C08L061-04

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Resists

(photo-, deep UV, azides for)

IT 25086-15-1, Methacrylic acid-methyl methacrylate copolymer 27029-76-1

59269-51-1, Polyvinylphenol 72317-19-2 85229-30-7,

Acrylonitrile-isopropenylphenol copolymer 100346-90-5,

m-Cresol-p-cresol-formaldehyde-2,5-xyleneol copolymer 102868-49-5

104426-15-5 104426-16-6 111634-04-9 112504-03-7,

m-Cresol-p-cresol-formaldehyde-3,5-xyleneol copolymer 123710-88-3

123737-03-1 123737-04-2 123737-05-3 123737-07-5 123737-09-7

RL: USES (Uses)

(binder, for deep UV photoresist)

REFERENCE COUNT: 3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 51 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1989:564243 HCAPLUS Full-text
 DOCUMENT NUMBER: 111:164243
 ORIGINAL REFERENCE NO.: 111:27213a,27216a
 TITLE: Etching-resistant photoresist
 compositions
 INVENTOR(S): Noguchi, Tsutomu
 PATENT ASSIGNEE(S): Sony Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 01093736	A	19890412	JP 1987-251395	19871005 <--
PRIORITY APPLN. INFO.: GI			JP 1987-251395	19871005 <--

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB In the title compns. containing tri- and tetraesters of 1,2-naphthoquinonediazide-5-sulfonic acid and Si-containing polymers, the latter are I and/or II (R1, R2 = lower alkylene; R3-R8 = H, OH, Me, methylol; R9-R12 = lower alkyl; R13 = methylene, CH2OCH2; Z = a phenol unit, a phenol unit with 1-3 substituents, III; R14 = lower alkylene; R15-R17 = lower alkyl; $0 < x \leq 1$; $y = 1-x$). High resolution and resistance to dry etching are obtained. Thus, a polymer corresponding to I was obtained by polymerization of IV and HCHO in Et cellosolve and oxalic acid. A solution containing the above polymer and the triester of 2,3,4-trihydroxybenzophenone with 1,2-naphthoquinonediazide 5-sulfonic acid in Et cellosolve acetate was coated on a OFPR-800 (com. resist) layer formed on a Si wafer to obtain a bilevel resist. The resist pattern obtained by exposure and development resolved 0.5- μ m line-and-space. By reactive ion etching with O, the ratio of the etching rates of the pattern and the lower layer was 1:20, and a fine pattern with a rectangular profile was obtained.

IT 117476-22-9

RL: USES (Uses)

(photoresist containing, etching-resistant)

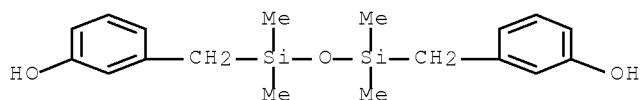
RN 117476-22-9 HCAPLUS

CN Formaldehyde, polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(methylene)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 117476-21-8

CMF C18 H26 O3 Si2



CM 2

CRN 50-00-0

CMF C H2 O

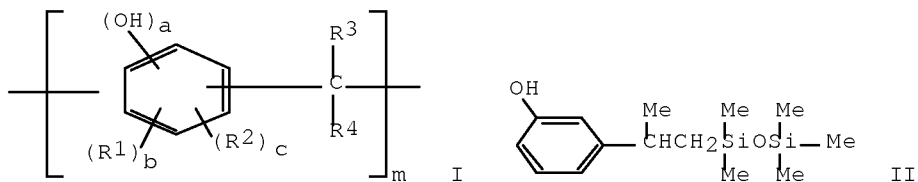
H₂C=O

IC ICM G03C001-72
ICS G03F007-08
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT ~~Resists~~
(photo-, siloxane-containing phenolic resin for etching-resistant)
IT 117476-22-9
RL: USES (Uses)
(photoresist containing, etching-resistant)

L28 ANSWER 52 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:125491 HCAPLUS Full-text
DOCUMENT NUMBER: 110:125491
ORIGINAL REFERENCE NO.: 110:20537a,20540a
TITLE: Photosensitive coating composition containing
silicon-containing polymer
INVENTOR(S): Horiguchi, Rumiko; Hayase, Shuzi; Onishi, Yasunobu
PATENT ASSIGNEE(S): Toshiba Corp., Japan
SOURCE: Ger. Offen., 44 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3810247	A1	19881006	DE 1988-3810247	19880325 <--
DE 3810247	C2	19930128		
JP 63237052	A	19881003	JP 1987-72113	19870326 <--
JP 01088447	A	19890403	JP 1987-245497	19870929 <--
JP 01107254	A	19890425	JP 1987-263965	19871021 <--
US 5063134	A	19911105	US 1990-455783	19900102 <--
PRIORITY APPLN. INFO.:			JP 1987-72113	A 19870326 <--
			JP 1987-245497	A 19870929 <--
			JP 1987-263965	A 19871021 <--
			US 1988-173546	B1 19880325 <--

GI



AB The title composition contains a photosensitive material and a polymer having recurring units of the formula I [R1-R4 = H, alkyl, alkoxy, alkyl; ≥ 1 of R1-R4 is a Si-containing C1-10 alkyl group; m = pos. integer; a, b = 1-3; c = 0-2; a + b + c \leq 4]. The material has improved resistance to O plasma and can be used in photolithog. applications. Thus, a mixture of II-m-cresol-p-cresol-HCHO copolymer and 2,3,4-trihydroxybenzophenone bis(1,2-naphthoquinone-2-diazo-5-sulfonate) was used to form a photoresist layer.

IT 119588-30-6

RL: USES (Uses)

(photoresist containing)

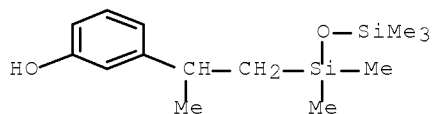
RN 119588-30-6 HCAPLUS

CN Formaldehyde, polymer with 1,4-benzenediol and
3-[1-methyl-2-(pentamethyldisiloxanyl)ethyl]phenol (9CI) (CA INDEX NAME)

CM 1

CRN 119564-73-7

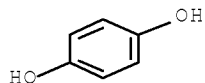
CMF C14 H26 O2 Si2



CM 2

CRN 123-31-9

CMF C6 H6 O2



CM 3

CRN 50-00-0

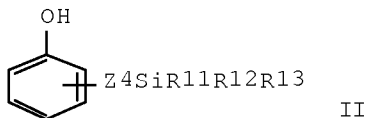
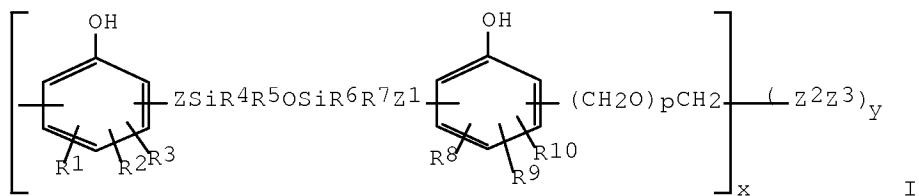
CMF C H2 O

H₂C=O

IC ICM G03F007-00
ICS G03F007-08; G03C001-72
ICA C08L061-04; C09D003-54; C09D003-81; H01L021-312
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT Resists
(photo-, silicon-containing polymer for)
IT 119588-16-8 119588-17-9 119588-19-1 119588-20-4 119588-21-5
119588-23-7 119588-25-9 119588-27-1 119588-29-3
~~119588-30-6~~ 119588-31-7 119588-32-8 ~~119588-34-0~~
119588-35-1 ~~119608-20-7~~ ~~119608-22-9~~
~~119608-23-0~~ ~~119608-25-2~~ ~~119608-27-4~~
~~119608-29-6~~ 119608-31-0 ~~119608-32-1~~ 119608-33-2
119608-34-3 119608-35-4 119608-37-6 119608-38-7 119608-40-1
RL: USES (Uses)
(photoresist containing)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 53 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1989:31421 HCAPLUS Full-text
DOCUMENT NUMBER: 110:31421
ORIGINAL REFERENCE NO.: 110:5141a,5144a
TITLE: Organosilicon polymer-containing photoresist material
INVENTOR(S): Noguchi, Tsutomu; Nito, Keiichi; Seto, Junetsu
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 3726858	A1	19880225	DE 1987-3726858	19870812 <--
DE 3726858	C2	19961121		
JP 63044652	A	19880225	JP 1986-189821	19860813 <--
JP 07072799	B	19950802		
GB 2196975	A	19880511	GB 1987-18598	19870806 <--
GB 2196975	B	19900912		
US 4865945	A	19890912	US 1987-83640	19870810 <--
PRIORITY APPLN. INFO.:			JP 1986-189821	A 19860813 <--
OTHER SOURCE(S):	CASREACT 110:31421			
GI				



AB A photoresist material is described which contains a polymer having ≥ 1 repeating unit of the formula I ($R_1, R_2, R_3, R_8, R_9, R_{10} = H, OH, Me, \text{ or } CH_2OH$; $R_4 - R_7 = \text{lower alkyl}$; $Z, Z_1 = \text{lower alkylene}$; $Z_2 = \text{a phenol moiety, a substituted phenol moiety, or a group of the formula II where } R_{11}, R_{12}, R_{13} = \text{lower alkyl and } Z_4 = \text{lower alkylene}$; $Z_3 = CH_2 \text{ or } CH_2OCH_2$; $p = 0 \text{ or } 1$; $x = 0-1$; $y = 0-1-x$) along with a quinone diazide sensitizer. Thus, a solution containing $HCHO$ (37% aqueous soln)., III, oxalic acid dihydrate, Et cellosolve acetate was heated to give a polymer which showed an etch speed of 7.8 nm/min in a reactive etching process.

IT 117476-22-9P

RL: PREP (Preparation)

(preparation and photoresist compns. containing)

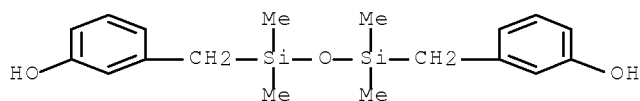
RN 117476-22-9 HCAPLUS

CN Formaldehyde, polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(methylene)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 117476-21-8

CMF C18 H26 O3 Si2



CM 2

CRN 50-00-0

CMF C H2 O

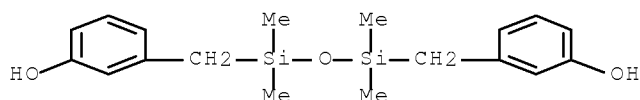
$H_2C=O$

IC ICM G03F007-10

10/593004

ICS C08L083-04; H01L021-312; G03C001-72
ICA G03F007-16; G11C011-14
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
IT Resists
(photo-, organosilicon polymer-containing)
IT 117476-22-9P 117992-07-1P 118037-21-1P
RL: PREP (Preparation)
(preparation and photoresist compns. containing)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

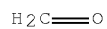
L28 ANSWER 54 OF 54 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1988:619445 HCAPLUS Full-text
DOCUMENT NUMBER: 109:219445
ORIGINAL REFERENCE NO.: 109:36151a,36154a
TITLE: A novel silicon-containing resist for a bilayer resist
system
AUTHOR(S): Noguchi, Tsutomu; Nito, Keiichi; Seto, Junetsu; Hata,
Izumi; Sato, Hiroshi; Tsumori, Toshiro
CORPORATE SOURCE: Res. Cent., Sony Corp., Yokohama, 240, Japan
SOURCE: Proceedings of SPIE-The International Society for
Optical Engineering (1988), 920(Adv. Resist
Technol. Process. 5), 168-75
CODEN: PSISDG; ISSN: 0277-786X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new pos. working photoresist which is applicable to the bilayer resist
system using a current g-line stepper was developed. This resist consists of
a naphthoquinone diazide photoactive compound and a Si-containing novolak
resin, which is synthesized from phenols with siloxane groups (-Si-O) and
formaldehyde by condensation reaction. The Si-containing resist has a
resolution capability of 0.5 μ m L/S with a g-line sensitivity about 250 mJ/cm²
and a high resistance to O plasma, with an etching rate ratio of 61:1
(photoresist/Si resist). A 0.5 μ m L/S pattern was precisely transferred to
the bottom layer by O RIE with vertical side walls.
IT 117476-22-9
RL: USES (Uses)
(submicron photoresist composition containing naphthoquinonediazide
trihydroxybenzophenone ester and)
RN 117476-22-9 HCAPLUS
CN Formaldehyde, polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-
disiloxanediy)bis(methylene)]bis[phenol] (9CI) (CA INDEX NAME)
CM 1
CRN 117476-21-8
CMF C18 H26 O3 Si2



CM 2

CRN 50-00-0

CMF C H2 O



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)

IT Resists

(photo-, polymeric silicon-containing, containing naphthoquinonediazide
sensitizer, for submicron lithog.)

IT 117476-22-9

RL: USES (Uses)

(submicron photoresist composition containing naphthoquinonediazide
trihydroxybenzophenone ester and)

10/593004

***** SEARCH HISTORY *****

=> d his nofi

(FILE 'HOME' ENTERED AT 13:00:07 ON 27 JUL 2009)

FILE 'HCAPLUS' ENTERED AT 13:00:18 ON 27 JUL 2009

FILE 'HCAPLUS' ENTERED AT 13:00:23 ON 27 JUL 2009

L1 1 SEA ABB=ON PLU=ON US20080241753/PN
 D IALL
 SEL RN

FILE 'REGISTRY' ENTERED AT 13:01:45 ON 27 JUL 2009

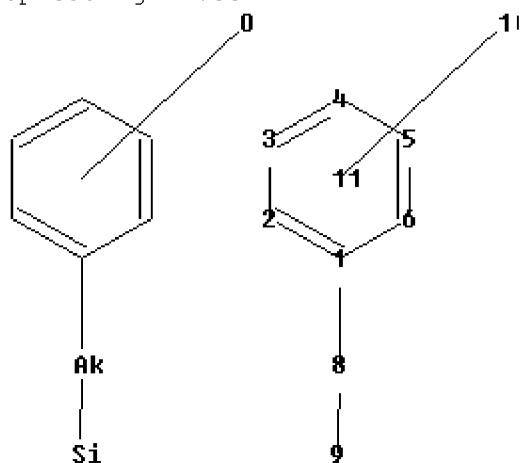
L2 9 SEA ABB=ON PLU=ON (138529-81-4/BI OR 144317-44-2/BI OR
 17464-88-9/BI OR 188557-77-9/BI OR 3089-11-0/BI OR 357164-86-4/
 BI OR 4356-60-9/BI OR 475115-04-9/BI OR 66003-78-9/BI)
 D SCAN

FILE 'STNGUIDE' ENTERED AT 13:03:03 ON 27 JUL 2009

FILE 'REGISTRY' ENTERED AT 13:11:50 ON 27 JUL 2009

L3 STRUCTURE UPLOADED
 D

Uploading L1.str



chain nodes :

8 9 10

ring nodes :

1 2 3 4 5 6

chain bonds :

1-8 8-9

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6

exact/norm bonds :

1-8 8-9

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

isolated ring systems :

containing 1 :

Match level :

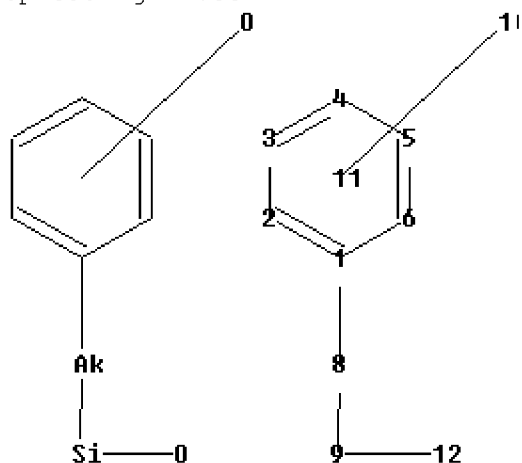
10/593004

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 11:Atom

L4 19 SEA SSS SAM L3
L5 5614 SEA SSS FUL L3
L6 2 SEA ABB=ON PLU=ON L5 AND L2
D SCAN
SAVE TEMP L5 LEE004REGL1/A
L7 STRUCTURE UPLOADED
D

FILE 'REGISTRY' ENTERED AT 14:09:35 ON 27 JUL 2009
L8 STRUCTURE UPLOADED
D

Uploading L2.str



chain nodes :
8 9 10 12
ring nodes :
1 2 3 4 5 6
chain bonds :
1-8 8-9 9-12
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-8 8-9
exact bonds :
9-12
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6
isolated ring systems :
containing 1 :

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 8:CLASS 9:CLASS 10:CLASS 11:Atom
12:CLASS
Element Count :
Node 8: Limited
C,C1-5

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L9          50 SEA SUB=L5 SSS SAM L8
L10         SCR 2043
L11         43 SEA SUB=L5 SSS SAM L8 AND L10
L12        1099 SEA SUB=L5 SSS FUL L8 AND L10
L13         2 SEA ABB=ON PLU=ON L12 AND L2
           SAVE L12 LEE004REGL2/A

FILE 'HCAPLUS' ENTERED AT 14:12:25 ON 27 JUL 2009
L14         594 SEA ABB=ON PLU=ON L12
L15         483 SEA ABB=ON PLU=ON L14 AND (AY<2005 OR PY<2005 OR PRY<2005)
L16         278 SEA ABB=ON PLU=ON L15 AND 74/SC,SX
L17         QUE ABB=ON PLU=ON POLYMER OR COPOLYMER TERPOLYMER OR RESIN
           OR HOMOPOLYMER
L18         228 SEA ABB=ON PLU=ON L16 AND L17
           E RESISTS/CT
           E E3+ALL
L19         26352 SEA ABB=ON PLU=ON RESISTS+OLD,UF/CT
L20         27 SEA ABB=ON PLU=ON L16 AND L19
L21         2536 SEA ABB=ON PLU=ON PHOTO (W) (RESIST? OR SENSITIV?)
L22         0 SEA ABB=ON PLU=ON L16 AND L21
L23         0 SEA ABB=ON PLU=ON L15 AND L21
L24        1864647 SEA ABB=ON PLU=ON RESIST?
L25         112 SEA ABB=ON PLU=ON L16 AND L24
L26        65758 SEA ABB=ON PLU=ON RESIST? (2A) (COMPOSITION? OR SOLUTION? OR
           FORMUL? OR ELECTRON BEAM?)
L27         36 SEA ABB=ON PLU=ON L15 AND L26
L28         54 SEA ABB=ON PLU=ON L20 OR L27
           SAVE TEMP L28 LEE004HCAP/A
           D QUE L28
           D L28 1-54 IBIB ABS FHITSTR HITIND

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